VERMONT LIFE

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VERMONT LIFE

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A Diploma in One-Man Logging

earned in ten years of
managing his Vermont
woodlot, is self-awarded
by ROCKWELL STEPHENS
Photographs by EDWARD P. LINCOLN

WHEN THAT big lumber truck pulled out of our pasture with a towering load of more than 3000 board feet of prime ash and butternut logs the occasion was a Great Moment. It was in a sense the climax of some ten years' apprenticeship in the art and techniques of cultivating a woodlot, for those big logs had been cut and brought out of the woods in a single-handed operation qualifying for a self-awarded diploma as a one-man logger.

Getting out a load of logs is a routine matter for most country-raised Vermonters, but not for a retired city couple in their sixties, to whom trees had hitherto been just scenery or lumber company forest not to be tampered with in person.

When first acquired, our modest piece of Vermont filled our every aspiration for a bit of pasture, hill and forest. It was a delight to explore the eighty-odd acres of mixed hard- and softwoods, logged over some thirty years before, but with a fine growth of maple, ash, butternut beech and birch. Hemlock stood along the brook, and old pastures showed small but promising stands of young white pine.

But even to untutored eyes there was evidence of uncontrolled growth and decay. Scrub pine, poplar and sumac were everywhere. The good hardwoods were overcrowded with young saplings and hornbeam which, with older damaged trees, occupied too large a share of growing room. Though we had acquired an asset of great beauty it was obvious that nature's abhorrance of a vacuum required a restraining hand.

We were fortunate in having a deeply knowledgeable ecologist as a neighboring friend and also a patient county forester to answer our innumerable questions, cruise the land, and launch us on a program of cultivation that has given us endless hours of pleasurable occupation and the satisfaction of day-by-day, bit-by-bit accomplishment.

Cultivate is the action word, but how does one cultivate a woodlot? How to cultivate a garden? The same idea, basically. Get rid of weeds so things have room to grow and to absorb the maximum nourishment of sun, soil, and moisture. Thin out surplus growing stock just as one thins a row of carrots. Leave carrots alone and there may be a fine show of green tops, but pull a few and they will be pencil thin. A tree should grow fat as well as tall, and as it grows it needs room for branches to spread and leaves to find the life-giving sun.

Thus the elementary credo of woodlot cultivation or forest management, to use the grand term. But for city bred, do-it-yourself foresters there are problems offering endless stimulus to the development of woods-wise know-how and new skills of eye and hand.

Lots of work, of course, but one toils as hard at any number of happy occupations in the name of pleasure: camping in the rain, climbing on skis with the wrong wax, canoeing and endlessly portaging among mosquitos, even spading a vegetable garden. Lest the gardeners make rebuttal, let it be said that unlike an intruding weed, when one fells a weed tree it stays put.

There are few more exciting and satisfying experiences than felling a tree. We must all retain some vestige of the pioneer settler to add zest to this occupation, for weren't we all taught that the pioneer's first task was clearing the forest for his plantings, then hewing the logs for his cabin? Give any boy an axe and he heads at once to attack the nearest log or tree.

Forest improvement cutting, as the forester calls thinning, is no unrestrained tree slaughter, but is a thoroughly considered, selective operation to free a good tree from the interference of one less promising, which may be crowding it and thus either slowing its growth or producing a crooked log of no value except perhaps as firewood.

It is in this process of selection that the amateur most welcomes the judgment of the professional forester. For several years our county forester, after surveying the area, marked with bright paint splashes the trees to be eliminated. Why this one, why that one we would ask.

Owner-manager-logger Stephens, opposite, limbs out a newly-felled maple and saws it into log lengths, which, at right, he skids out with his Jeep.

Though we acquired some little knowledge, we were far from confident of our judgment when he put us on our own to cut a test plot. We spent many moments of deliberation and weighing of factors before starting the saw. All those decisions. . . .

But at least we did not fall into the magnificent error of one woodlot owner we heard of, who thought the marked trees were the ones to save, and cut down everything else.

Having selected a tree, one is faced with the problem of where to drop it. Will it fall free or hang up in the branches of its neighbors? Will it damage in its fall other trees of potential value? And finally, when a reasonably satisfactory slot has been found to drop it into, is its shape and possible "lean" such that it can be made to fall as planned? Problems and more problems — but that is where the fun begins.

The trick is to notch the base in such a way as to leave what is in effect a hinge, to control the direction of the fall. With reasonable skill a tree can be dropped exactly on the selected line as the saw cuts into the wood opposite the notch, and releases all but the hinge. If the trunk is big enough, a wedge can be inserted in the back cut to prevent the saw from binding and to encourage the start of the fall.

The more complex the problems in picking the line and manipulating the chain saw for the cut, the greater the satisfactions when all goes exactly as planned. But there are times when a careless or impatient move can bring the operation to grief.

One big butternut is a case in point. Eighteen inches across the base, it was a bit too big for the short reach of a lightweight saw. And it had to be dropped downhill in a narrow slot between a big hemlock and a clump of even larger basswoods. This was a real challenge. Lengthy deliberation evolved a plan to use a trick known as box cutting to get it down with the short saw. This involves cutting from each side of the felling notch as well as back to front. All went well until those last few seconds of tension and expectation when the tree was just about ready to go and the prudent logger got set to jump back and out of the way of his falling juggernaut. (A down hill fall often can produce a wildly flailing tree.) Impatience led to a moment of carelessness in gauging the saw's position for the final cut, which failed to free the wood equally on both sides of the felling notch. Though only a few feet off the planned line of fall, several big limbs dropped into the clump of basswoods and produced a hang-up of magnificent proportions and hours of extra work.

But there are days when the eye is good and luck is with you, such as the time we worked on a group of tall, spindly maples in spite of a gale of wind blowing the tops in wild gyrations. But the wind was gusty rather than steady. As my partner, posted on a hillside above, signalled a lull when the tops were quiet, the saw could go home for the final cut. And every tree dropped that day right on the button.

Fortunate is the forestry amateur whose spouse also enjoys woods work. Pruning is her major contribution, as well as thinning wrist-size saplings and limbing felled trees. (Pruning off the lower branches of small pines ultimately

helps produce knot-free, premium grade lumber.) Given a razor-sharp little bow saw and longer handled pruner — the blades replaced the instant they call for any effort — she can make an impressive contribution. And when it comes to getting logs out of the woods, extra hands to fasten a chain or position a chock for a lever are invaluable.

It was fortunate that we could often improvise operations safe from the critical eyes of an expert audience, for we were sometimes put to devices which, though effective enough, surely bordered on the ridiculous from a professional point of view.

A pro's first sight of our Mitey Mouse tractor produces a look of amused incredulity, until it walks away with a forty-foot log. A crawler smaller than a parlor sofa, it is probably the sole survivor of a breed produced at least twenty years ago. Just three feet wide and six feet long, it weaves its way through woods without benefit of road or a cleared path. Though geared to a walking pace even slower in low gear — it has the traction of a centipede and is undaunted by the steepest slopes.

Mitey Mouse and a Jeep — with top removed — provided our tractive power, the Jeep taking over whenever it could maneuver close enough to reach the logging chain. Substituting a Jeep for a woods-wise logging horse often took it into spots no respectable motor vehicle should be expected to work in. The attrition rate on tail lights ran high at times, and many a stump bears the scars of its steps, whose battered appearance testified that our Jeep is no mere road vehicle.

Ambition occasionally led us beyond our resources. Rain and much traffic had reduced to mud a portion of the track over which we had to draw the largest logs from our harvesting cut of ash and butternut. A short but steep grade proved too much for Jeep or tractor when buttoned onto one big sixteen-footer. Mitey's tracks churned and the Jeep's four wheels spun in vain.

Paul Bunyan himself would have snorted in disgust at the expedients we tried — including a day spent rigging double tackle blocks and enough rope and chain to let the tractor work from firmer ground.

Our unorthodox rig worked beautifully, but with limited rope length we gained only a few feet at a time. So we swal-

One of the big logs proves too much for his equipment. Stephens cants it around to gain slack, and Olin Maxham takes it over with his powerful yoke of oxen.

lowed our pride and let a good neighbor's team of big oxen come to the rescue.

Old Paul might have chuckled, too, at the scheme for moving logs up over this grade and then down a long and occasionally quite steep pasture slope to the truck-loading bay. A six-foot farm sledge with iron-shod runners, which we salvaged from a neighbor's barn, served the purpose. But each trip was an adventure. We would roll or pry one or two logs onto this sledge, try to balance them fore and aft, and lash them with a pair of log chains. Lacking the important tool known as a log binder to take up slack, we drove wedges under the chain to tighten up, and hoped they would stay put. All would go well on the uphill trip but the run down was like a long toboggan slide on the grassy pasture. The Jeep had to keep ahead of the pursuing logs with just enough pull to restrain their tendency to yaw and pitch. We managed not to jackknife and never lost a log, but beginner's luck was surely with us.

Every season is a good season to work in the woods, except for that brief, early summer black fly time. Winter's snow is an asset rather than a handicap, for skis get us quickly and easily to the work area, and deep snow gives the pruning saw a longer reach than when working from ground level. Snowshoes admittedly are the accepted winter equipment, but the longtime skier considers them slow, clumsy and tiresome.

Forest management is based on long-term goals. Hence small scale, amateur woodlotting is largely a labor of love to protect and improve a future asset. An occasional sale of logs from mature trees and the by-products of improvement cutting yield comparatively little immediate cash. But this and payments from the Agricultural Conservation Program for meaningful work done under the supervision of the county forester, can roughly cover the direct costs of chain saws and tools. Our wages may be ten cents an hour, but we remind skeptics of a farmer's retort to the efficiency expert who urged modernization of his poultry yard: "What's a hen's time wuth?"

There seem to be no statistics on the number of Vermonters whose principal or part-time interest is woodlot cultivation. But their number is considerable and their work of the utmost importance in conserving and improving the woodlands, which constitute one of the state's greatest assets.

Roughly three-fourths of Vermont's total area is forested and all but a fraction

The personal logger makes provident use of limb wood. It is cut and stacked for fireplace use later.

is capable of growing commercially valuable timber. More than 90 per cent is privately owned, but of this less than 20 per cent is owned by the forest products industry. More than three million acres are in private hands, with by far the largest share held by nonresidents.

Hence the concern of conservationists and foresters for the burden of responsibility carried by the woodlot owner.

Where to find advice and help? Nothing simpler: pick up a 'phone and make an appointment with the county forester. Vermont's thirteen county foresters in a recent year looked over nearly a hundred-thousand acres of woodland and assisted close to four-thousand landowners. Their work is supplemented by a growing number of private, consulting foresters who can plan and, if desired, handle the execution of a complete forestry program.

But most fortunate, in his own eyes at least, is the happy amateur who can savor to the full the pleasures and satisfactions of cultivating his own woodlot with his own hands. For him the ideal life lies in taking large doses of this prescription: ℞ — One woodlot, preferably mixed hard- and softwoods. Cultivate as required, checking periodically with a professional forester. Keep tools sharp. Never lift when possible to roll or lever. Forego the sin of impatience and pause frequently to recognize the good fortune in helping nature its beauties to preserve. ∞

VL REPORTS

Back Road Tour

SAMUEL R. OGDEN

It has become an established custom now for this column to lay out a "back road tour" once every year, and this has been going on now since the Autumn issue in 1966. For good reasons the season for these Vermont odysseys has been changed to spring. While in the fall there are both the glories of the foliage and, later, the further vistas which open up when autumn winds have blown the tapestry of leaves from the trees, at this time of year hazards may confront those who travel in the mountains.

In the summertime more people are able to make such a tour, and the roads present no difficulties, provided that one waits until mud time is over. And who can say that one season in Vermont is more beautiful than another?

So once more we are off. I beg those who go with me to make allowances for the interval which must exist between the time I make the trip and the time when you make it, for certain stretches of road which I have described as dirt or gravel, may have been paved in the meanwhile.

This time we start in front of the General Electric plant in Ludlow, and head east on Route 131, which is Main Street. Very soon we cross the Black River, which in former days served as the excuse for the mills which made Ludlow quite a center for the manufacture of woolen cloth. Ludlow's Black River Academy in former days shaped the lives of many famous people, including the late President Calvin Coolidge, whose birthplace and grave we will visit on our return.

After crossing the bridge the second street on the left is Commonwealth Avenue, and we turn here at the corner where stands a stone building, one of the many built of the native stone and written about by Stephen Whitney in the Autumn 1970 issue. Our tour will take us to the site of one of Whitney's "Three Stone Churches" and several more stone buildings.

Keep straight ahead now to the end of the road, some two-and-a-half miles from where we started. Here we turn right on a blacktop road another half mile and then turn left onto another blacktop road which follows the valley of a pleasant brook, which is called, for the distance it lies from the pre-Revolutionary "Number Four" fort on the Connecticut, "Twenty Mile Stream."

Soon we come to an impressive set of buildings on the left. The sign proclaims this to be "The Mad Wives' Stable," and so another fascination is added to the spectacle of an enormous and architecturally interesting set of buildings located in this remote spot. How did this place get its name and what is its history? Some day I shall find out.

We keep straight ahead on this road to its very end, about four miles from the start up the valley. Here we turn right onto blacktop, this road leading uphill for a ways and then, crossing the divide, descending toward South Reading. But before arriving at the village we turn left at a crossroads marked by a sign (pointing in the opposite direction): "Farrels."

This is a dirt road onto which we turn, but before doing so it might be worthwhile to continue for less than a mile into the village and examine the stone church previously mentioned.

Back now on our dirt crossroad we cross a brook in about one mile and at the "Y" just beyond the bridge we bear right. Soon we come to a lovely brick building on the left, obviously at some earlier day a tavern. Just beyond it on the right is a cemetery, around which the road curves, and just beyond that we come to another "Y" with a red house on the left. Here the forks are curiously marked "After Lunch" and "Before Lunch." We take the After Lunch direction to the left and after about a mile on this charming dirt road we come in sight of busy Route 106 off to the right. But we don't join it yet. We take a left branch at the corner where a dead elm is decorated with a whole string of deer skulls. After about a mile on this road we debouch onto Route 106 and turn left.

We follow Route 106 to Woodstock, passing over the divide of Reading Hill down into Kedron Valley where, at South Woodstock are several points of interest: the old Academy (on Vermont Life's cover a year ago), the Kedron Valley Inn, two ancient arched stone bridges, the Woodstock Country School and the home of the Green Mountain Horse Association.

Going into Woodstock we pass along the newly-refurbished greens and fairways of the Woodstock Country Club and then, as we come into the village green, we pass the brand new Woodstock Inn, which Laurence Rockefeller has built of brick on the site of the old Victorian structure. Across the green is the new covered bridge shown in this magazine, also a year ago.

We will pass through, but let those linger who choose to, for this village undoubtedly is one of the most charming places of its kind in all of New England, particularly from an architectural point of view.

Turning right in front of the Inn we quickly come to a main intersection on the left and we turn onto it, following Route 12 across an ancient iron bridge, sharp to the right and on for a mile or so. Then at a Texaco station we keep straight on, while Route 12 curves off to the left, and we head for South Pomfret, then climb to the right to North Pomfret and down to Hewetts Corners, where we turn left, as the old iron sign indicates, for Sharon, which was the birthplace of the Mormon prophet, Joseph Smith.

Down the hill toward the White River Valley, we duck under the railroad and then turn sharp right. In about a half mile we turn sharp left and cross the river to Route 14 on the other side.

Across the main highway we reach a dirt road, which soon takes us under Interstate Highway 89.

It now seems as though we had crossed a border line into a different country. Behind us lies the sophistication of the wealthy, part-time Vermonters, the rich farm lands and the lovely Pomfret hills. Now we pass through what at times might be termed rural slums. Thus we see a cross-section of Vermont and it serves our purpose in placing the other part in perspective.

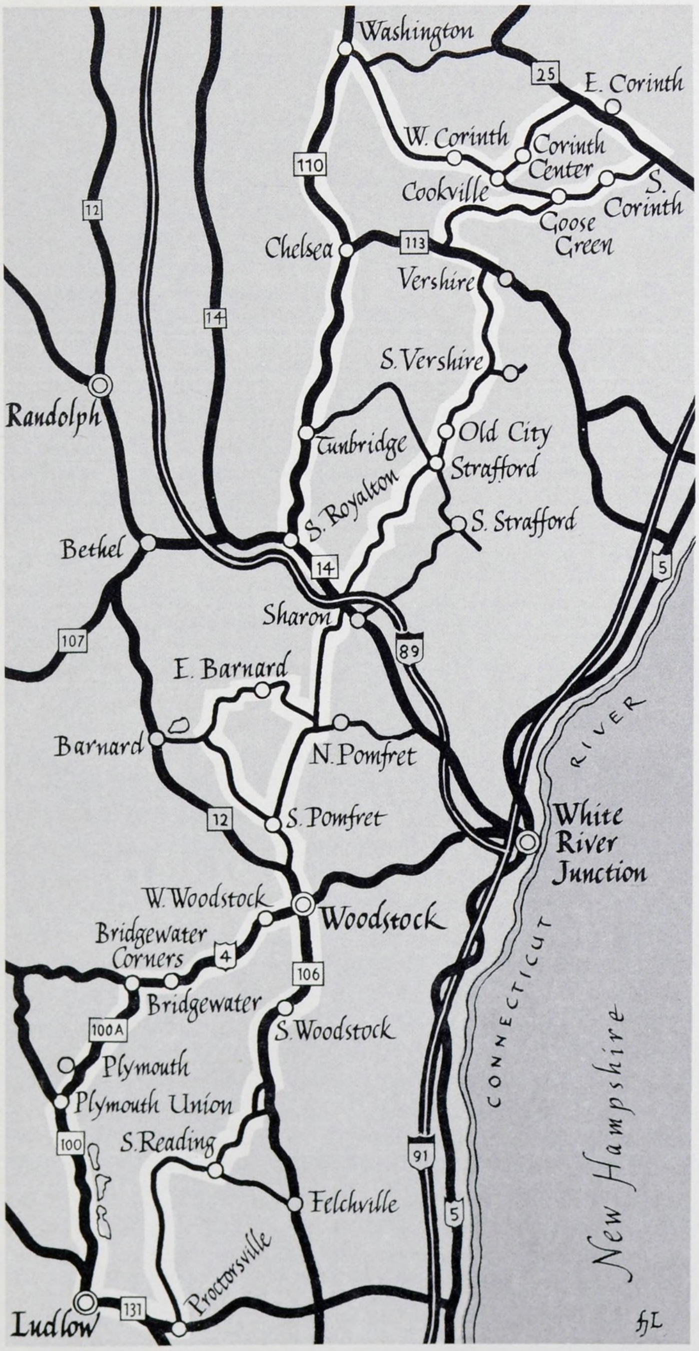
Soon we enter Orange County, the start of our trip being in Windsor, and about nine miles from where we crossed under the Interstate we come to Strafford Village where there is a lovely village green adorned by the beautiful church shown on this magazine's summer 1964 cover. Just below the green is the birthplace of Justin Morrill, now a National Historic Landmark, for Congressman Morrill was responsible for the Land Grant College Act.

At the green we turn left and after three-quarters of a mile turn right again onto a dirt road marked "Old City." The sad state of the countryside here may be the result of the closing of the copper mines at South Strafford, which were the oldest in the nation, when peacetime after World War II forced the low grade ores out of business.

At any rate we pass beyond the Old City cemetery up the valley of Old City brook and in about eight miles hit Route 113. Here, about a mile and a half beyond Vershire Center, we turn left. At this point there is a fine view of the Green Mountain range to the west. Vershire was the scene of the infamous "Ely War" when in 1883 an insurrection was staged by 300 enraged copper miners for the reason they had received no wages for a long time.

We follow Route 113 less than two miles and turn right on a road marked "Goose Green." At that village we turn right on blacktop through South Corinth, and stay on this road four and six-tenths miles. Here we hit Route 25 and turn left.

Straight on through much-photographed East Corinth, which lies in the Waits River Valley, and about three miles from where we joined Route 25, we turn left on a dirt road which in three miles takes us to Corinth Center, then on through Cookville, which is the Corinth postoffice, through West Corinth (another three miles) and finally to the village of Washington, which is eight miles west of West Corinth. All of these Corinths are tiny communities and the countryside is typical of back-country Vermont where the places are still family farms.



Washington is a neat, pretty village. Here we pick up Route 110 and turn south on it to the left, now on our way back to Ludlow.

In Chelsea we sense a return to land touched by the magic of moneyed immigrants. This is a handsome village situated on the first branch of the White River and it boasts two town commons. In this town is buried the original Morgan horse.

We continue south on Route 110, after nine miles coming to Tunbridge, which is noted for its "World's Fair" each September. The fairgrounds are on our right as we continue through South Tunbridge and about six miles more to South Royalton.

We cross Route 14 and the river into the village, a typical Vermont trading center with a large and handsome green which is graced with a marble arch memorializing the courage of Hannah Hunter Handy when she rescued children from Indian raiders.

As we come to the green we turn left and go straight about three miles, then turn right under the railroad and Interstate. Soon we are nearing Hewetts Corners again, but just a half mile short of it there is a road turning to the right at an acute angle near a white house. An ancient wooden sign says "Barnard."

We turn here on a good gravel road and past a house sporting a whole mess of wagon wheels and after about two miles reach the crest. Two more miles downhill brings us to East Barnard, which is a delightful village really off the beaten track.

In front of the store we turn left, having made a right swing around the church. Here is another ancient sign, this one of cast iron, which points the way to Barnard, and this is our road.

About two miles from our start we come to a handsome old tavern on the left, the sign reading "F. A. Akin's Inn, 1823." Soon we come to the Sonnenberg Ski Area, where we keep the pond on the right and continue another half mile, where we make a sharp left, at a spot where the road we were following becomes blacktop, onto a lovely gravel road which ends near the Suicide Six Ski Area at South Pomfret, on the road we traveled before.

We retrace our way to Woodstock, but we don't turn sharp across the iron bridge, instead follow the north bank of the Ottauquechee to the west end of the village and join U.S. Route 4 going west as far as Bridgewater Corners. Here we turn away from heavy traffic left on Route 100A, passing through Coolidge State Park to Plymouth Village. Slightly off the main road is the Coolidge birthplace and reconstructed residence where he took the Presidential Oath. Here also is a museum and cheese factory, owned by the President's son, John Coolidge.

Out on Route 100A again we soon come to the lefthand road to the cemetery where the President and members of his family are buried. The writer and his son made the iron railings which lead up the stone steps to the Coolidge plot.

A steep hill takes Route 100A southward down to Plymouth Union past the beautiful Amherst, Echo and Rescue Lakes on Route 100. Soon we are back in Ludlow and our trip is done, the total distance being a bit over 160 miles. The elapsed time depends on the stops and visiting we do along the way, but it surely would not be over six and a half hours, including time for lunch.

A physicist and an electronics technician work out a proposed manufacturing change. At right a microscope is used to align needle probes to test tiny memory chips' circuits.

IBM, Vermont's Industrial Giant

has brought dramatic changes to booming Chittenden County

by RUTH W. PAGE

Photographs by HANS WENDLER

FOUR THOUSAND employees from some 75 northwest Vermont communities pour through its doorways every day; their cars make a richly-colored, mathematically precise mosaic on the 33 acres of parking lots; the product they turn out is shipped across the nation and around the world.

International Business Machines does not seek big-city sites for its plants. This one, in Essex Junction, is the largest industry in Vermont. (The General Electric Company in nearby Burlington at its peak in 1969 employed 3,400.)

In the 1950's Essex Junction was a village of some 5,000 souls, a quiet little community of partially rural aspect where everyone knew everyone else "downstreet," and Burlington, 10 miles to the west, was the nearest center for shopping and recreation.

Economic growth in Chittenden County had suffered a setback: the woollen mills in the adjacent City of Winooski closed down in September, 1954, throwing 1900 persons out of work.

Then citizens of affluence or influence in the County planned, and secured financial support from county taxpayers for an organization designed to lure new industry to the area. The Greater Burlington Industrial Corporation, supported by taxes voted by the towns of the County, is still active today.

Through a related outfit known as Cynosure, Inc., a speculative building of 40,000 square feet was erected, and its availability and advantages were made known to a number of businesses and industries in the U.S.

Essex Junction was chosen as the site for a variety of reasons: plenty of rural open space around the original plant for possible future expansion; land less expensive than in urbanized Burlington. It was a low-slung industrial building tucked into the gentle roll of land off Maple Street, with a distant backdrop of Green Mountains, to blend into the landscape as it could never do in a paved city. Essex Junction was known to have an excellent school system and had a history of sound school support. And it was near the home of the University of Vermont and two excellent teaching hospitals.

It was announced early in 1957 that International Business Machines had agreed to move into the speculative building, where it would produce wire contact relays. Initially, it hired fewer than 500 persons.

The County rejoiced at the announcement, and took IBM to its heart, commercially and socially. Most residents knew only that it was a stable industry, produced computers and other highly sophisticated equipment, and followed a pattern of fatherly benevolence in dealing with its employees, with the result that none of its plants was unionized.

IBM on its side admitted it chose the Essex site for a new plant not only for the reasons mentioned earlier in connection

These 1000-degree centigrade ovens are used in the manufacture of memory circuits, which are employed in some System/360 computers and in all of the new System/370 computers.

with Cynosure, but especially because the area had a good supply of willing, nay eager, workers, conscientious and well-trained. In 1957 the County was hungry for work. And the reputation of Vermonters for not wanting something for nothing has been borne out by IBM's Essex experience. Plant Manager James J. Ritchie says that one spur to growth of IBM in Essex has been the fact that "people in this area take pride in their work and strive to do a good job."

IBM in Essex has grown from the 40,000 square foot building in which it began to a million square feet in six immense (for Vermont) buildings, with another under construction. Employment at first rose slowly — only 460 by the end of 1963. Then it jumped to 800 in 1964, 2500 in 1965, 2900 in 1966, 3100 in 1967, 3400 in 1968, and more than 4000 today.

The first employment boost came when the company shifted to production of the so-called Solid Logic Technology module which is a basic building block in the IBM System/360 computer. It continues to produce the tiny SLT modules, and now is also turning out the new "Monolithic Technology" chips.

The full impact of this large industry on a rural town and county is not subject to exact measurement, because of course other businesses and industries were not standing still during the 13 years of IBM growth. Yet economists ascribe a massive part of the area change to IBM. Thirty-three per cent of the industrial jobs in the County are provided by IBM.

In the 1950's, an office could hire a trained secretary for $60; today, she gets $100 and more, if she can be found at all. Thirteen years ago, the boss could pick and choose among candidates for employment; today he has a tough time finding a trained person and often has to hire the semi-skilled and offer on-the-job training.

Early in 1960 the population of Chittenden County was 74,425; in January 1970 it was 99,131. Family average income leaped from $6,362 to $10,900, and total employment was up from 27,127 to 40,800.

Retail sales, an excellent index of prosperity, rose from $91 million in 1960 to $173.5 million in 1970. In short, while population grew 33 per cent, retail sales went up 47 per cent.

Bank deposits nearly tripled in the same ten years; telephone subscribers went up 40 per cent and kept New England Telephone in a state of frantic construction activity. Effective buying income more than doubled — from $118,976 to $254,102 in 1970.

Is all peaches and prosperity?

Not so; for the rise of IBM and the simultaneous growth of GE (with its '60s war contracts) brought some big-city headaches to the cities and towns of the County. Some of those who had welcomed IBM most warmly in the thin-employment days of the late fifties became the most vociferous in objecting to the waves of urbanization rising higher and higher in its powerful wake.

It used to take 15 to 20 minutes to drive from Burlington to Essex Junction, but it now takes up to 40, depending on the state of the traffic; area towns like Shelburne, Hinesburg, Williston, Milton, Colchester, Jericho and Underhill which used to be rural, sleepy and relaxed, have been shaken by the influx of families and are building roads, getting used to complicated traffic channeling, constructing schools, sub-divisions and shopping centers with all the tax and other headaches which accompany them.

There is no question in old-time residents' minds whence both the affluence and the drawbacks of growth have sprung: it's these IBM'ers. Most resented is the cost effect resulting from having dense settlements of IBM'ers in six towns, while all the company local taxes go to Essex Junction alone. "We buy the schools and pay the teachers, and Essex gets the taxes" is the wail in the rural sections.

They are right, and IBM would be the first to agree. But IBM hasn't set up the tax system in Vermont, and can't change it. It merely pays its share — to the Village of Essex Junction (although the Town of Essex gets a portion indirectly). In 1970, IBM paid half of Essex Junction's total tax bill.

IBM employees living in surrounding towns, and some as far away as Newport (72 miles), St. Johnsbury (75 miles), and Champlain, N.Y. (70 miles), are in many cases making substantial contributions to the life of their communities. The company encourages employees to be active in politics, and workers serve on school boards, libraries, boards of selectmen, recreation commissions, planning groups, service clubs, and fund drives — but the parent company is not permitted to contribute to local coffers.

Everyone knows that no household pays enough taxes to cover the cost of educating the children who live in it, and there is considerable local disenchantment with the "benefits of new industry" in such places as Williston, where the school population doubled between 1963

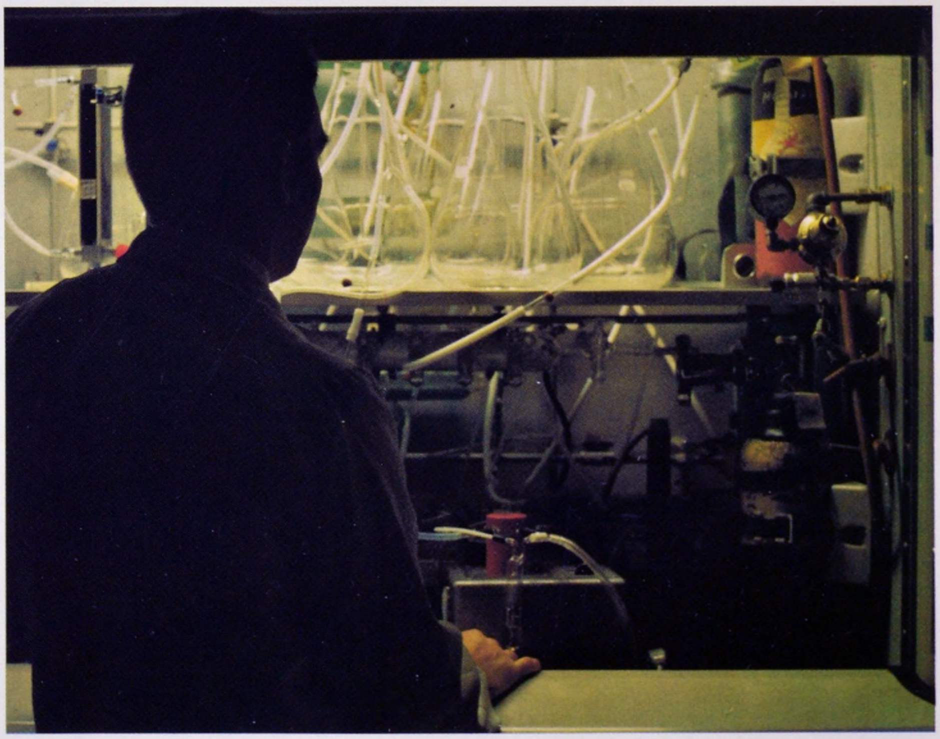
Electron microscope scans computer elements at 500,000 magnification. At right, status of a job is checked on a computer. Far right, components tested in simulated, polluted air.

Protective coat of glass is deposited on completed circuits. At right, air and gases are metered exactly to create varied environments. Far right: photography work in a "clean room."

and 1969, while taxable property increased but little.

The County's roads were laid out in the last century. The combination of population increase and car-use would have made a traffic snarl in Greater Burlington even without the big IBM plant; but no one denies that it compounds the difficulties. Not only does it put thousands of cars on the road between 7:30 and 8:30 each morning, all pouring into the village of Essex Junction; but it means traffic to and from all the car-washes, cleaneries, eateries, beauty shops, shopping centers and other businesses which mushroom in the purlieus of growing industries.

Essex Junction is partly right in attributing its traffic problems to IBM, and the motorists who wait out 60-second light sequences may be forgiven for muttering imprecations against the monolith; and

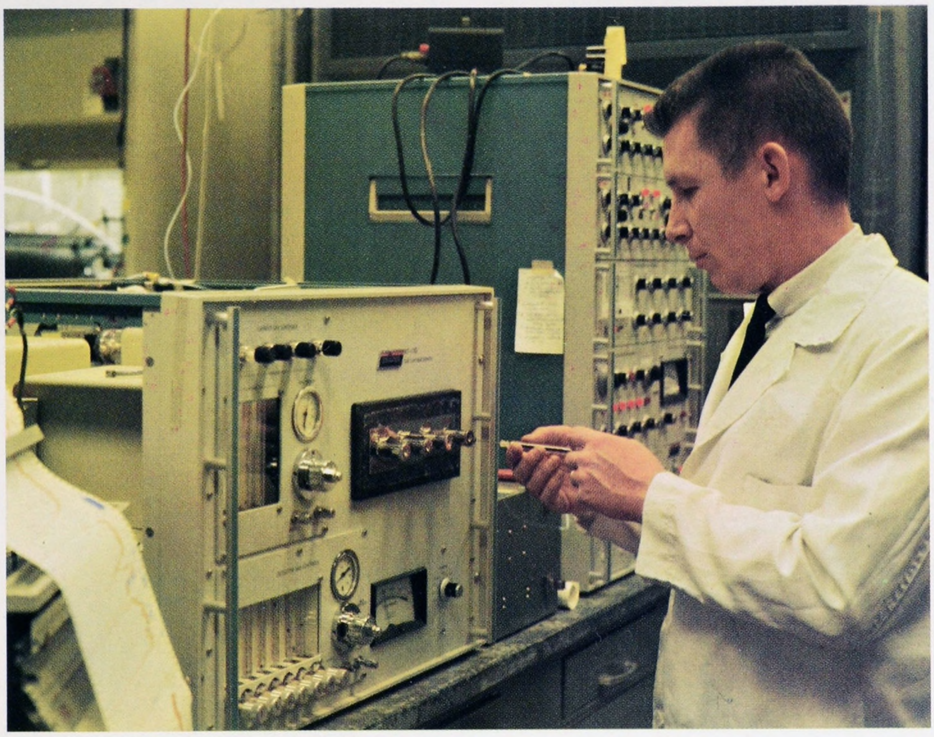


users of the whole web of crowded highways tying the core towns together are right to give IBM a heavy share of the blame for snail's-pace traffic, though the company staggers the starting and stopping times of its employees to lighten the road load.

But IBM has a basic characteristic which snugly fits the Vermont tradition: it believes in good-neighborliness. Its reluctance to advertise its virtue also fits the mold. The motto is, "let the good we do be discovered, not advertised." Direct benefits include a recent $100,000 contribution to the United Fund, largest ever given in Vermont by a single industry and its employees, and substantial assistance to other local drives for various institutions and services.

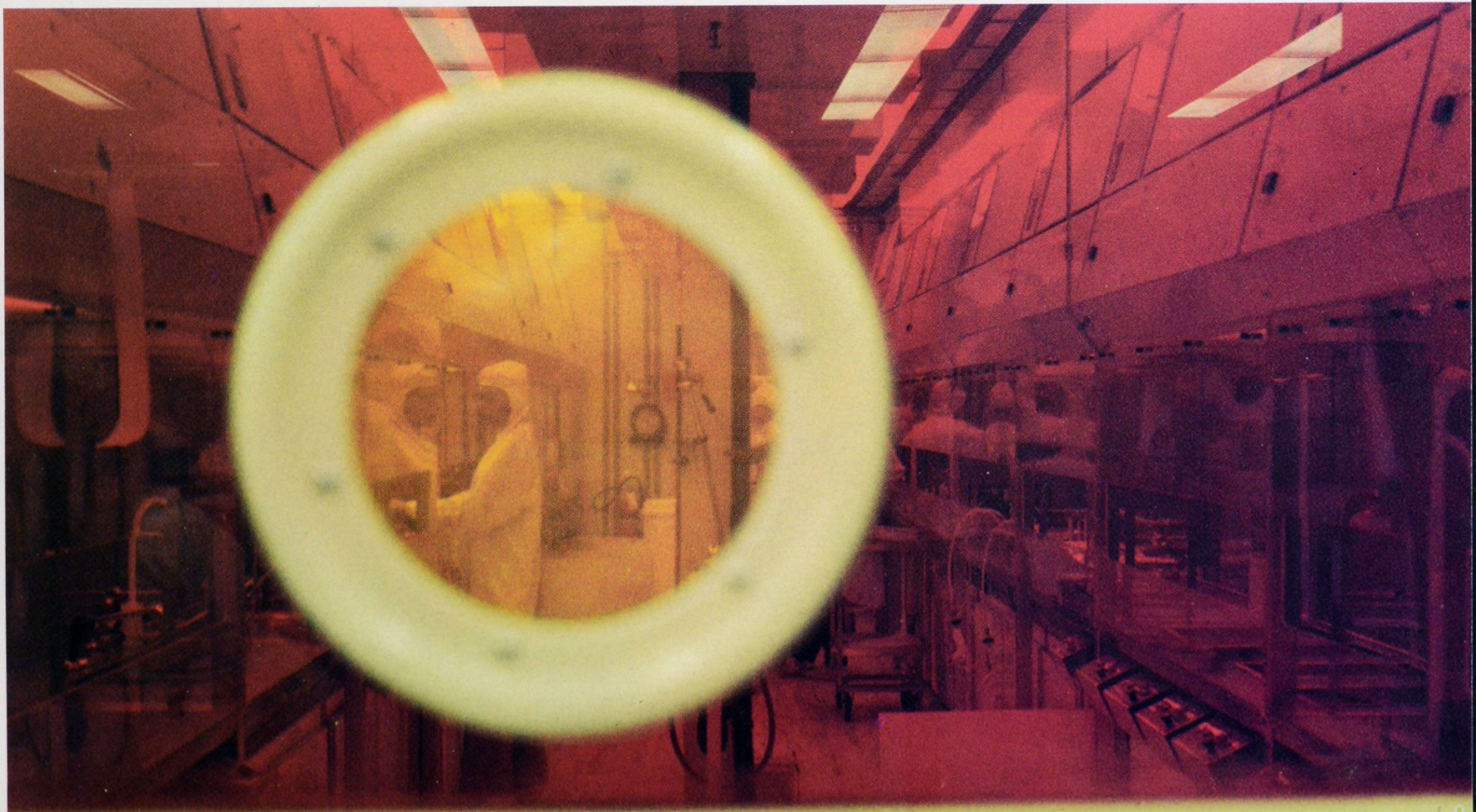
Area Vermonters have learned to know Black Americans better, as IBM hires without regard to color. Ladies in saris no longer draw gasps of amazement as they cross Pearl Street in the village of Essex Junction to shop for the family groceries. IBM'ers from India, Japan and Europe are a common sight. The IBM subsidiary called the World Trade Corporation sends American employees to France, England or Germany for 12- to 18-month tours of work, and brings natives of those countries to Essex for information exchange and work experience.

The big company has set an example to the state in pollution control, too. When natural gas came to Essex two years ago, the company switched from industrial fuel to the cleaner gas, and now has a zero sulfur dioxide emission and only a thirtieth of the soot emissions it had before. Its sewage plant is the only sizable one in the state which gives full (tertiary) treatment and discharges the effluent to the Winooski River quite a lot cleaner than the water already there.



The company provides a recreation area for its employees, builds its own access roads, provides its own fire protection which has more often come to the village's assistance than the reverse, and has trained many fire fighters of whom 60 are now volunteers with local departments in other towns.

While it is impossible to decide whether IBM is "good" or "bad" for traditional Vermont, it is always the prime example both for those who favor new industry in the state for its financial and intellectual benefits, and those who oppose it for its urbanizing effects.



But IBM "fits" modern Vermont just as its buildings fit their surroundings, They are carefully placed and unobtrusive from a distance, big and impressive when visited.

The under 500,000 inhabitants of the Green Mountain State must have some large industries in order to support their state budget ($109 million last year); IBM has the advantages of stability and genuine community concern. Many who grumble about schooling the children and battling the traffic admit they would hate to return to the days of low pay and job scarcity. They are glad to live in the county where personal income growth has outstripped all the rest of the state.

Greatest of the worries is whether large industries of this kind may in time destroy the physical and psychological landscapes of Vermont. Will the snug family farms with pretty hillside meadows and ambling cows be pushed back or paved over to provide for growing suburbs, and will the independent spirit that resents "handouts" (sometimes including social security) and makes self-sufficiency its god be lost?

The solution is easy to see but is difficult, in practice, to provide. Vermont must try to choose light, stable, nonpollutive industries and, as with housing, know when to stop. Too many of even the finest industries would urbanize the whole state.

Such an industry as IBM, which brings both wealth and sound, skilled new residents to the state may in fact help to preserve Vermont's traditional ways and open spaces, which were becoming pretty expensive for a small, rural population to support. ∽

WHAT THEY MAKE

IBM Essex is the mammoth which labors to bring forth the mouse, for the product of the million-square-foot, 4,300 employee plant is a tiny chip less than ⅛ inch square.

The chip is tiny but significant as the molecule is tiny but significant. Its component parts are numerous and full of energy.

Each little square contains 1434 devices visible only under the microscope (optical instruments surround the great machines producing and testing these mites). Enough electronic circuitry packs each chip to make 60 transistor radios.

Why miniaturization? Because the smaller the electronic message-carriers, the shorter the space each impulse must cover, and the faster it gets there.

The Solid Logic Technology chips which led to the tradition-breaking 360 computer that led the field until the monolithic technology was developed, were produced at IBM Essex from 1964 to the present time. In September, 1970, the company announced that it was producing the first computer in the IBM line to use monolithic memory components in its main memory — the System/370 Model 145. Previously, the chips were supplementary to the traditional "core" memory, and speeded up its work; now, they have replaced the core.

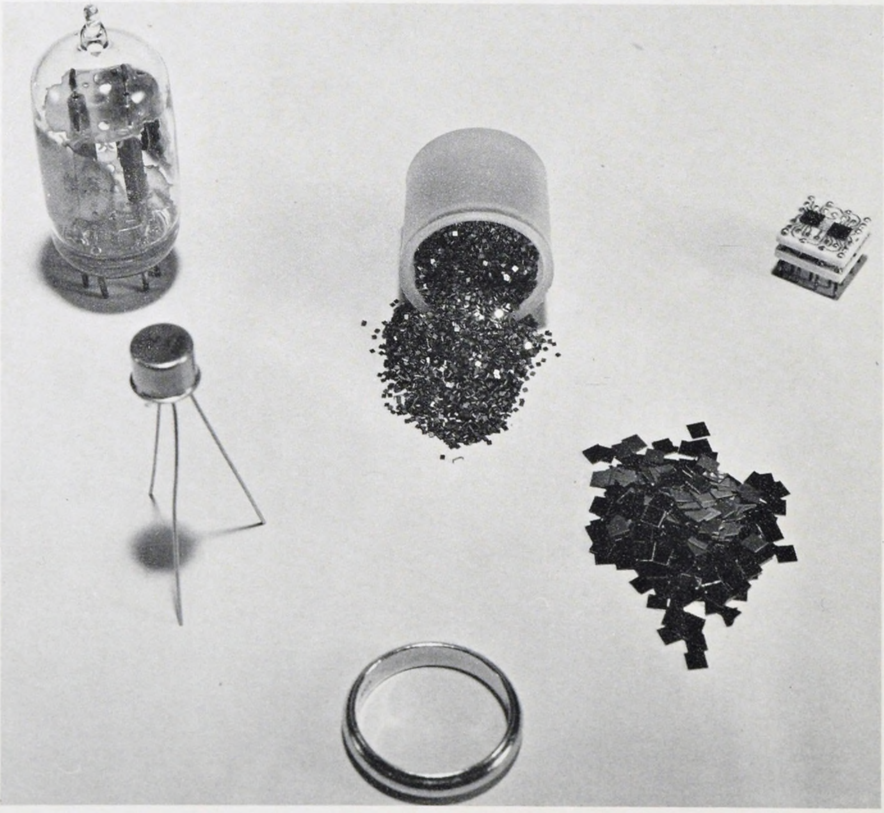
The designation "monolith" derives from the fact that a single piece of silicon contains all the electrical devices and connections. Circuits are designed large-scale and then reduced to 1/200th of the original "picture," or mask. So tiny is the final circuit plan that a speck of dust can wipe out two or three circuits and wreck an entire chip. "Clean rooms" are provided for this production, operators are masked and coated like surgeons, and the air is continuously filtered to keep out dust particles.

Each memory chip can economically store 128 bits of information in its 174 circuits and 1434 devices. Two such chips are fastened to a substrate or base, and two substrates are fastened together so they can be "plugged in" as a unit. This combination module can store 512 bits of information.

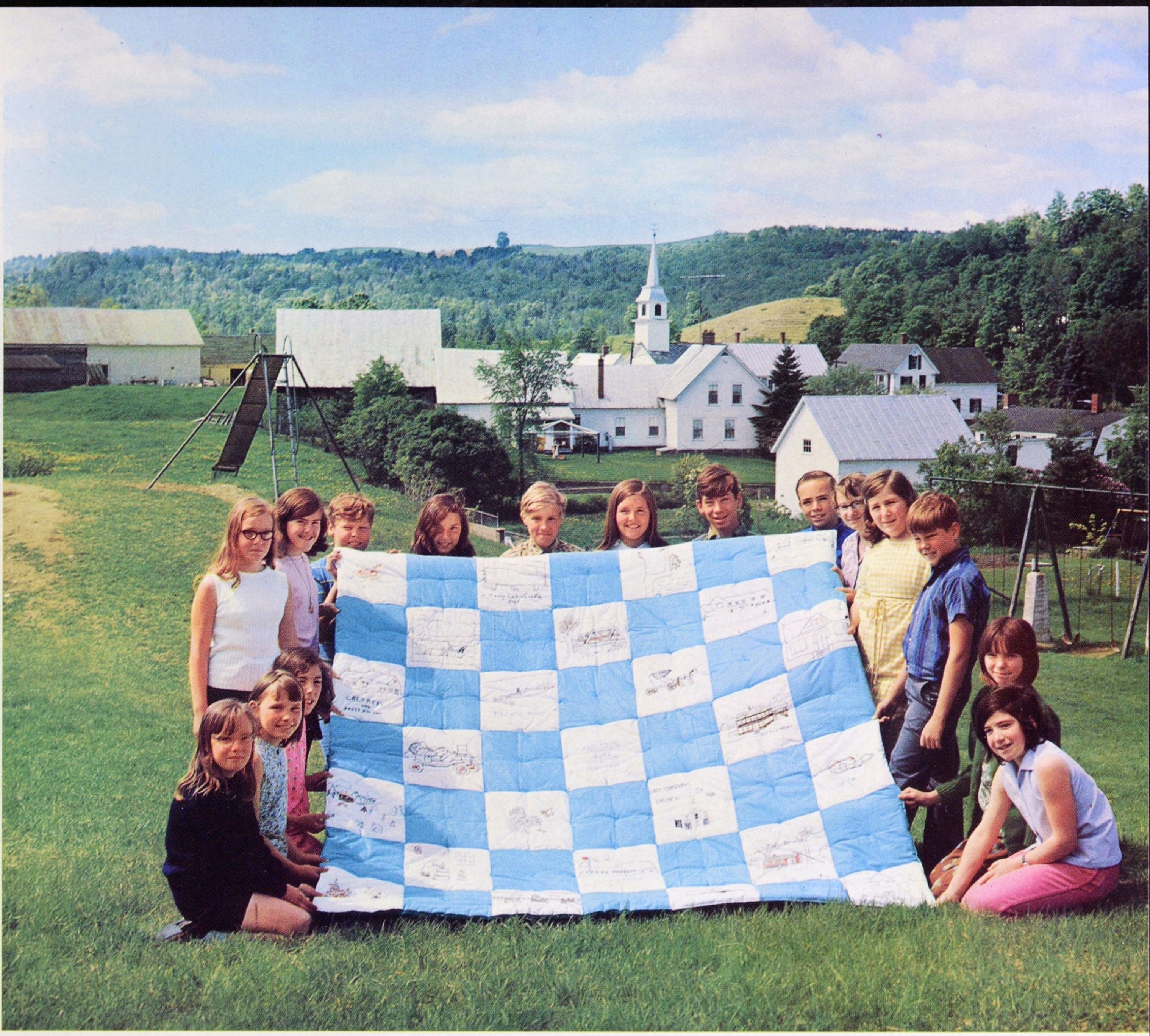
Development engineering for this was done at East Fishkill, N.Y., and the product engineering (finding ways to produce the chips by the thousands under factory rather than laboratory conditions) was done at Essex Junction.

Thus Essex's tiny, fast monolithic memory components make it possible to create a physically small, high-speed computer.

As the electronic devices become tinier, more and more sophisticated means of producing and patterning them have been developed. Is there a visible end to the process? Yes; if the holes in the chips ever become smaller than a molecule of vapor, the vapor would not be able to enter, and it is that which diffuses the material into the chip. That ceiling, however, still appears to be a long way off.



Evolution of electronic hardware: from top left, the vacuum tube, replaced by hat-shaped transistor, then in mid-'60s by transistors on tiny chips, (in tube.) Each contains more than 1,400 components. Chips are mounted on modules (right rear). Man's ring, foreground, is for scale.



The East Corinth quiltmakers pose before the much-photographed view of their village.

HISTORY ON A QUILT

was the imaginative project of these grade school students for East Corinth's 200th birthday.

Photographed by
NORMAN MACIVER

ELLEN DODGE thought up the idea of the quilt for her students at the East Corinth school, and the pictures they drew were related to the town's 200th birthday.

The children did all of the embroidery, too, and much of the sewing, helped by Mrs. Joanne Kennedy of Pike Hill. Their pictures show places in the town that are of historic and cultural interest, as well as buildings which are popular landmarks.

Other school groups, of about eleven children each, embarked on a variety of other projects, which included making scale models of the areas near the town's two schools. The other school is in Cookville.

At the end of the school year, when their several learning and doing projects were completed, the children presented their Corinth quilt to principal Peter Richards, who was leaving for a year of advanced study. Now it is his treasured reminder of the beautiful and much-photographed Corinth hills, of the fine youngsters there, and of Mrs. Dodge, whom he remembers as "probably the finest teacher in the world." ∽

A NEW DESIGN FOR RETIREMENT,

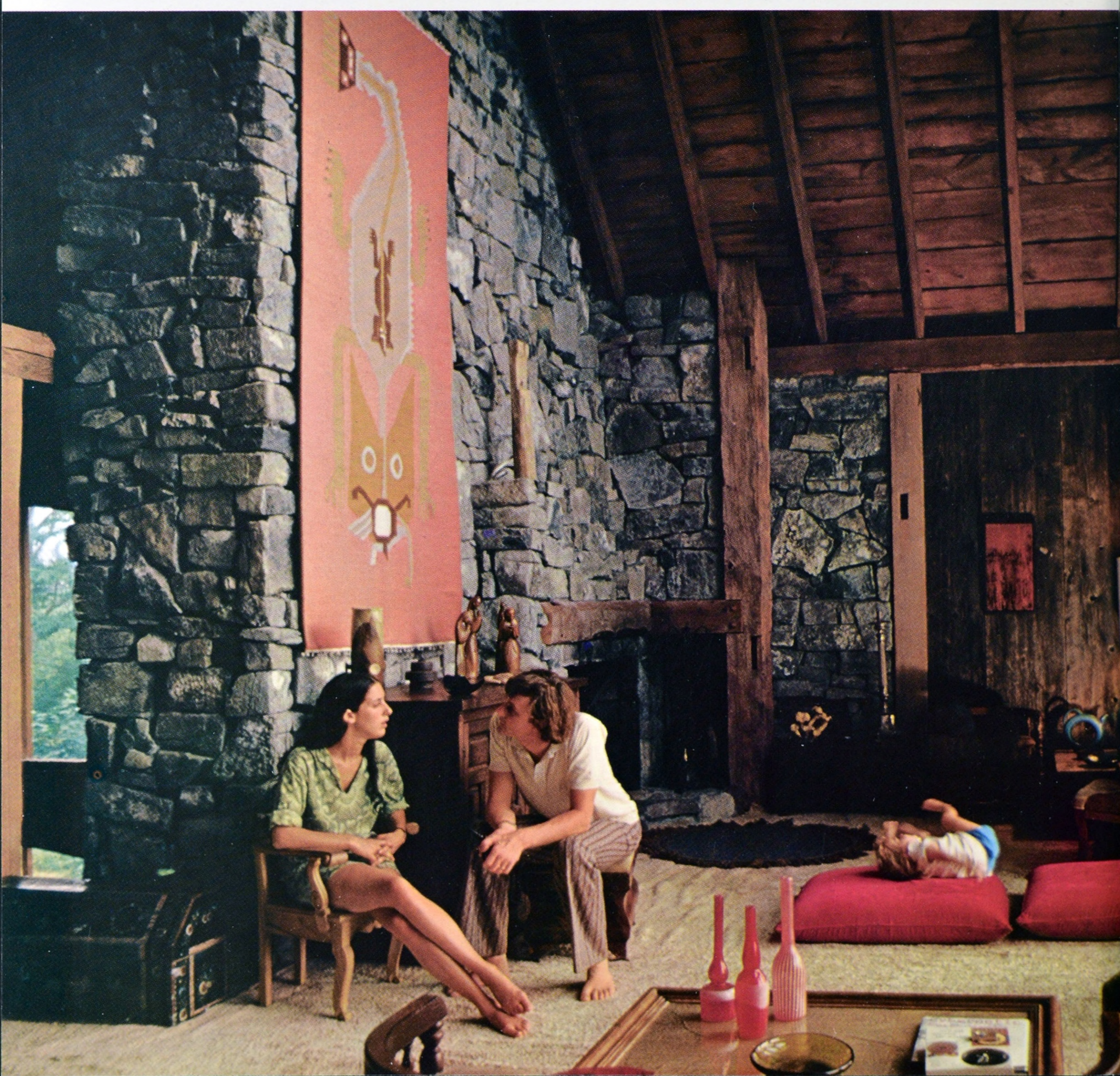
Jon Powell's gift to his father, launched a family project that resulted in this unique barn home.

by CLARENCE E. POWELL
Photographs by CLYDE H. SMITH

The transforming of Vermont barns to handsome homes, discussed in our Autumn issue, has led VERMONT LIFE *to present this fine example, chosen from many.*

Located in the rolling back country of Cornwall, the Powells' The Barns *was a total family concept.*

Not only was the project entirely planned by the Powells. To a staggering degree it was achieved by their own hands. Fittingly Clarence Powell tells how it all came about.



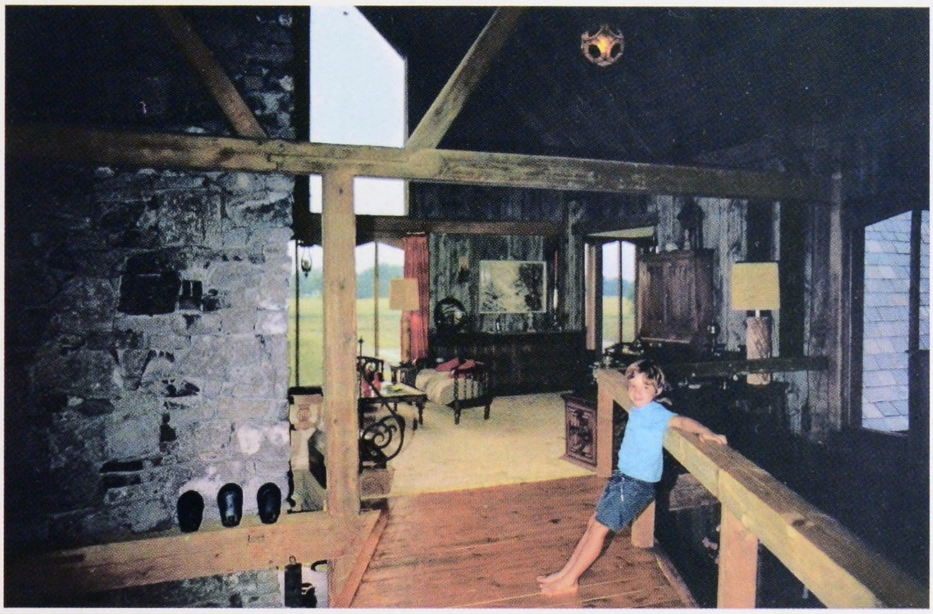
My wife and I first saw the farmhouse and barns of the "old Warner place" in Cornwall when our son Jon sent pictures to us in Mexico City. Our daughter and her husband were proposing that we buy the farm together — they to build among the birches overlooking the valley and Green Mountains, and we eventually to use the old farmsite when I retired.

We first saw Vermont actually — its snow and the farmsite — when we arrived for Christmas. It was then that Jon presented me with his "design for retirement," a scale model of the barns converted to be our home.

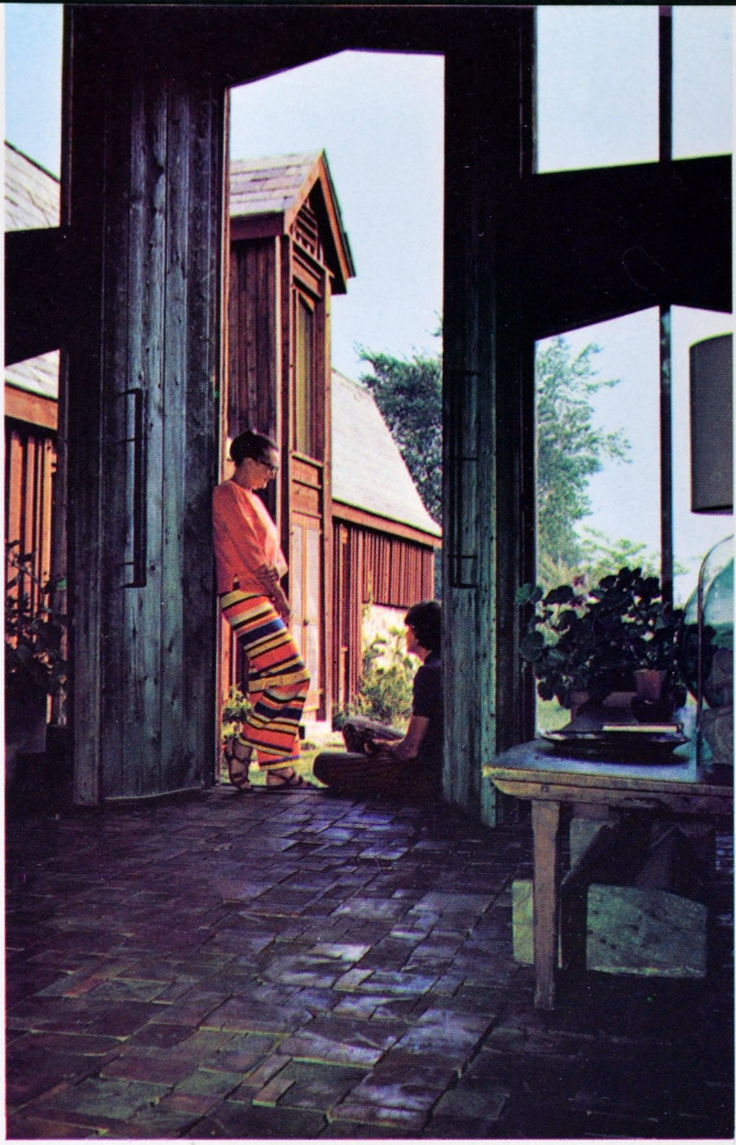
Jon and I soon were climbing all through the barns — determining their soundness and discussing the practicality of the proposed conversion. Much to the surprise of the building community, we decided to start the project in May.

Returning to Mexico City, my wife Catherine, Jon and I began planning "the barns." Jon, studying at the University of Mexico and the University of the Americas, made sketches, layouts and plans. On weekends the three of us haunted the thieves market, hunting for hinges, lighting fixtures, curtain loops, old iron chains, hooks — anything that we could visualize would work toward achieving the proposed character of the project, "the marriage of spatial enormity with human textures and proportions." One of our real finds was twelve antique cast iron hinges which would support the 12-foot high entrance door. The hinges, strangely enough, were made in Philadelphia, circa 1800.

In May came reality, first a gigantic clean up — hay out of the hay mow, pieces of old machinery from below. It was a careful sorting of broken and abandoned items accumulated for 50 years. Anything potentially usable was saved. For example the lighting fixtures in Jon's bathroom later were made from old teatcup racks salvaged during cleanup.

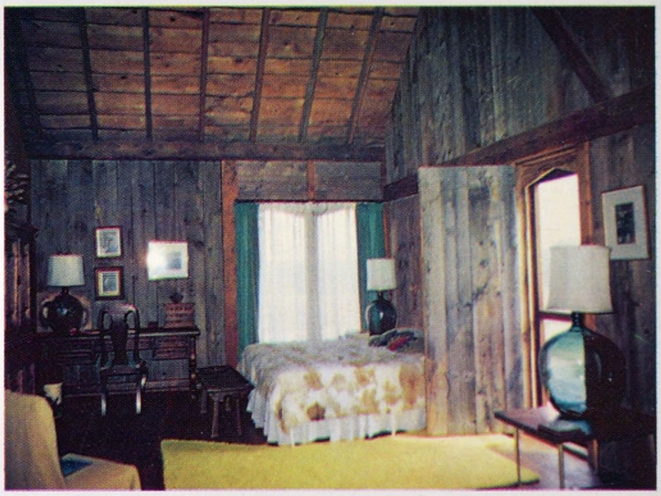


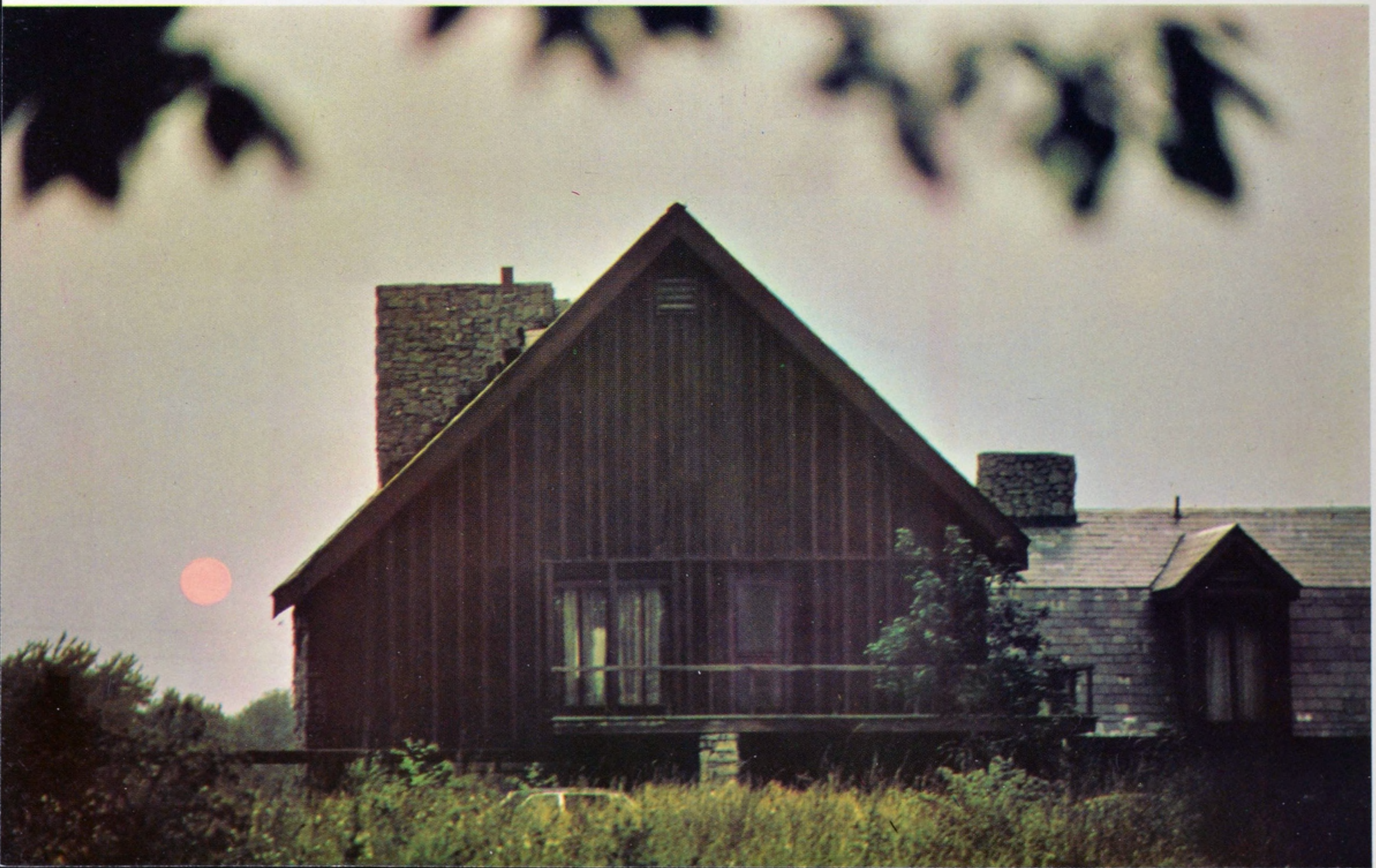
Architect Jon Powell and wife, Pamela, are in the second floor livingroom, left, also shown in part beyond the bridge (above). Bridge connects livingroom to bedroom wing at top of spiral stairs. Diningroom, below, under livingroom, has brick Catalon ceiling. Below left is massive main entry.



Father and son descend the spiral stairs from upper bridge. Treads are made from silo staves. Fireplace at right goes through massive wall to diningroom, its rough stonework ideal for climbing. Below right is upstairs study.

Mrs. Powell and son, Jon, are in entry hall which is floored with upended timber blocks. Below, in southern wing, is master bedroom, whose long, exterior deck shows in the outside view at bottom.





Then came the planned demolition. Two askew wooden silos were lowered and dismantled, all siding removed, carefully denailed and stacked by widths. The hay mow's rough-sawed floor joists were stored, the main barn braced to prevent racking, and finally all the slate was removed from the roofs, sorted and counted.

Now we had to raise the barns eight feet in order to pour footings and foundations. Being neophytes in conversion, we cut cribbing and, using two hand jacks, we went round the barn, cribbing like kids with Lincoln logs. We raised for a month, all the time worrying about heavy winds, which could have blown over our skeleton.

Next we dug the trench for footings and foundations. Jon and I finished the fireplace footings on a rainy weekend when the clay was so gummy, it was harder to get it off than onto the spade. This base was an important one, since it was calculated to support 80 tons of stone and mortar comprising the fireplace and wall, whose T-shape was designed to be the lateral support for wind loads. When finally we got out of the ground, the foundations poured and the skeleton lowered to its new location, the roof peak was 42 feet above ground level.

Jon planned to use heavy, textured stonework in order to reduce the barns to human scale. The rough piers supporting the decks and the wall facing the road, served the practical purpose of pulling the roof down, giving the barns a compact look. Normal, smooth stone or brick work would have increased the dimensions visually. Jon's travel in the Yucatan and around Mexico decided him on Mayan stonework to give the desired roughness. The stones, no obvious mortar, look as though they support themselves, as indeed they do in the old Mayan temples. Our stones came from Panton, where they were bulldozed from the ledges, adding to their roughness.

The stonemason, Art LaFountaine, thought Jon a young whippersnap when he started to lay up his first pier, and Jon continued to dig out the mortar almost as fast as Art put it in. He muttering that the whole thing would fall. But after the first pier (by the garage), Art began enjoying the "crazy stones," and by the time he reached the fireplace wall in the living room, we had very little "mortar digging" to do after hours.

Jon and Art hurried to finish the fireplace and hearth in the hallway, before Jon went off to architecture school at Yale. The hearth is a play of color and texture from the large Vermont field stone recovered in the foundation of the old farmhouse that we eventually demolished. According to Art, the fireplace was "too high" and "too narrow" and looked like a doorway into the dining room. But he was in the swing of it now. The "snake walls," the fireplace and the walls growing toward the living room on the second floor, had the rough, desired pull-together look.

When Art's helper, Phil Cubeta, returned to school with roughly only eight feet of wall attained, my wife took over the job of sorting, splitting and bringing stones to Art. When she complained to the new man who was mixing mortar that it was either too thin or too thick, he muttered "mix it yourself" and walked off the job. She did, approximately ten tons.

Now the pressure was on. Art always left at deer season, and he could not lay stones during the winter, due to a previous hand injury. The old hay hook now was used for pulling up mortar and stone, and finally the living room fireplace was

completed. Art cut through the roof for the chimney, but then deer season called. So Reggie Nadau, the head carpenter, and his men topped off the chimney, and we celebrated with two fireplaces burning.

Art returned in the Spring to lay the brick Catalan ceiling that Jon wanted, to give solid quietness to the living room floor and to contrast its subdued arches with the openness of the hallway. We used common brick laid upside down, the mortar forming the key stones.

Our woodlot now had the look of an old lumberyard. The gift of a 90-foot barn yielded hand-hewn beams. "Flame grain" siding, orange on top with charcoal base (west side of barn), were set aside for kitchen and bar paneling. The yellow-eyed and soft grey of southern exposure was used for our bedroom. The taupe and grey (east) went in the entrance hall, and Jon sorted the wind-eroded steel grey (north side) for his studio and bedroom. The three-quarter round, hay polished roof rafters became the supports for his bedroom floor, cut to a given length. This was determined by an average individual hitting his head on the ceiling before stepping off the unrailed balcony of the bedroom.

Beams seemed to be in abundance until, suddenly needing a 15-foot 8 x 8, we found there was none. It was months before we located one under the summer kitchen. We found "honey pine" ranging in widths from 12 to 28 inches in the attic of this same kitchen and used it on our bedroom floor. Other bedrooms and baths were floored with the tongued, grooved and beveled silo boards. For the dining room and kitchen, the attic of the farmhouse gave us 14-foot by 14-inch width pine without even a nail hole.

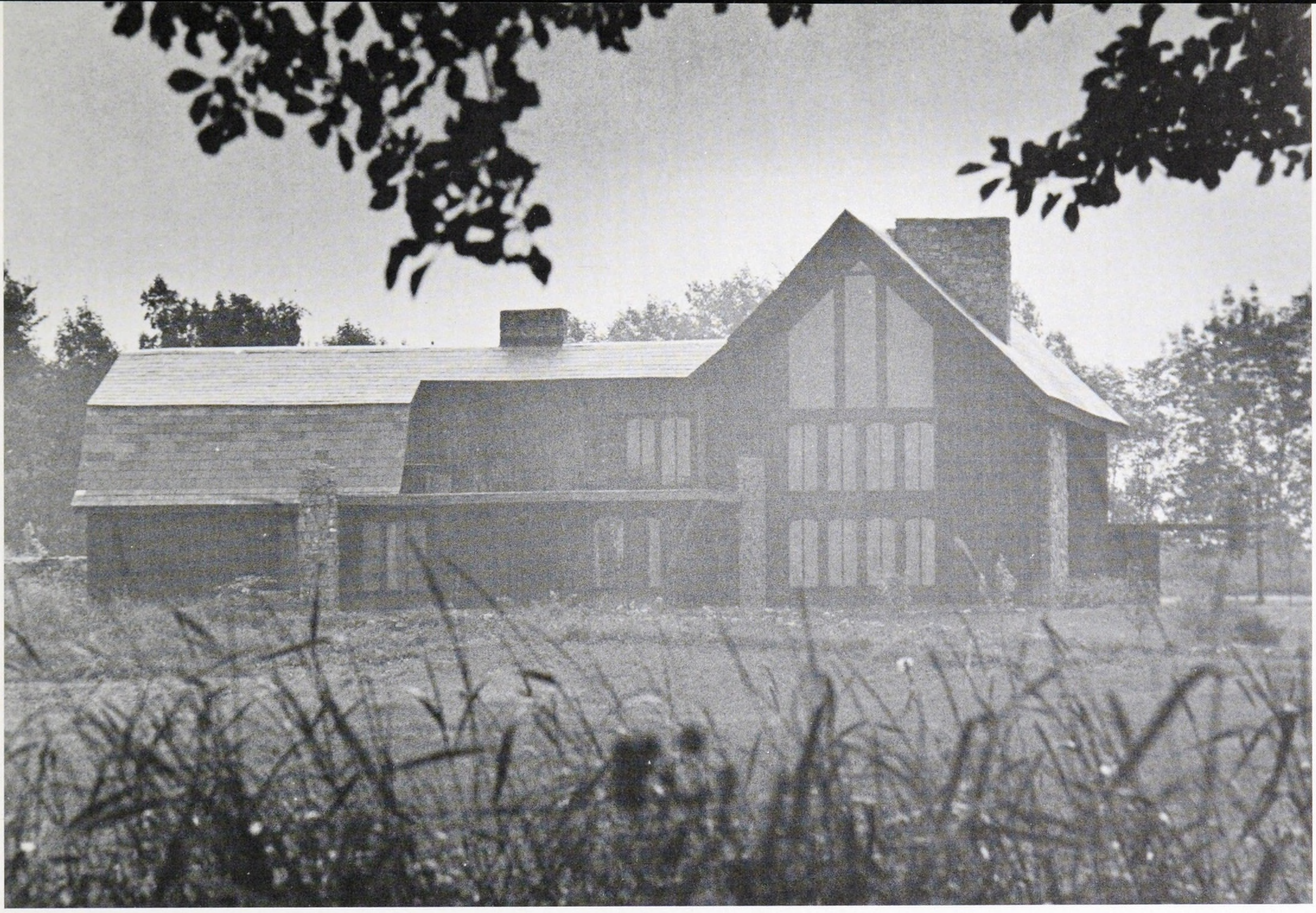
We reached a bottleneck in the stairway, our lumberyard unable to supply the desired thickness. Then Jon located an unused, beautiful silo in Hartland, which proved a treasure of orange, yellow, black and grey three inch thick pine. The colored boards became paneling for the study and the grey ones were made into 42-inch stairtreads, which wind from the entryway to the bridge on the second floor, connecting living room with sleeping area.

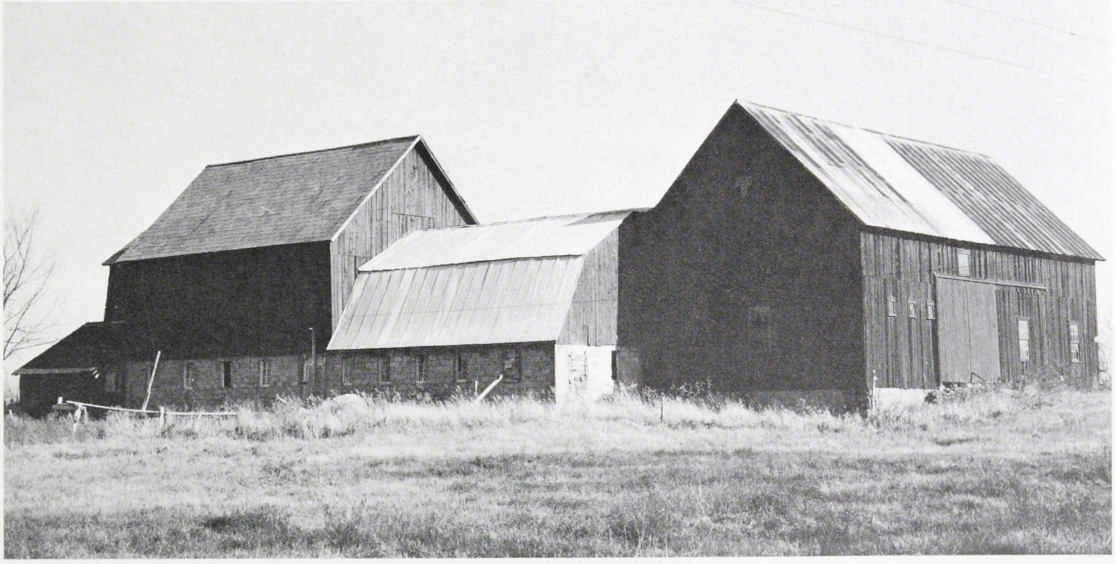
We used everything. Sliding barn doors were naturals, since they slide open, becoming part of the wall, for a feeling of openness. Exterior doors were made by the carpenters from old corn crib boards. The closet doors were fashioned from the old, handmade farmhouse doors after they had been cleaned and antiqued. For lock hardware, we often selected odd items of iron from the "junk pile," placed them on the floor, then rearranged them until we found a pleasing, functional assembly. An example is the front door, locked by old strap hinges and a barn door hanger. The door pulls are "dogs" once used to keep plate and joist beams together.

In our bedroom we upended a 12-foot hay window, playing its fragility against two heavy white supporting beams.

Our final "use everything" provided the solution for what to use to floor the entry hall. We had saved any potentially usable scrap. The carpenters, using a 3-foot gas-driven saw, cut three-inch thick blocks, developing cross sections ranging from 14 x 9, 10 x 12, 8 x 8, 4 x 8 to 1 x 6. These blocks were then laid out, like a giant jig saw, in mastic, and they became our memory of the woods we had handled.

To cover the barn, we reversed the red siding, giving a hay-aged brown exterior. For battens vertical 2 x 4's were used again, working mass into a cohesive appearance. For the deck siding we used





Great mass of native stone is laid up in Mayan style from building's west wall, opposite. Back of entryway and spiral stairs are seen to the right through window. To the right and above are the challenging "before," as photographed by Jon Powell, and the beautiful "after" of the Powells' "The Barns."

old, first-cut slabs, which had been the hay mow floor, scorched to various shades of yellow by the hay as it heated in aging. Our conversion was now a home, complete in its spatial quality, augmented by the fenestration of the massive windows which gave varying light patterns, whose scope we had failed to realize.

All grandparents need an island in the kitchen. Our grandchildren love to sit cross-legged here, at eye level with grown-ups. They eat, they play, they feed their younger brothers or sisters. In fact they have a good behavior time. We feel it is because they look us in the eyes and feel grown up. I love to have them on the island, because they always want to help my wife make pies or cookies. The island assures me of dessert.

Our first Easter was planned by our four-year-old grandson, Erik. Entirely unknown to us he invited all his friends here to an Easter egg hunt. Fortunately, on the Friday before, a parent mentioned they would see us Sunday morning early. Further inquiries disclosed the plot. We hurried about managing to develop the Easter egg hunt which now is a tradition for our grandchildren and their friends.

Decorating the 20-foot Christmas tree is the beginning of our family holiday. We place it in the curve of the stairway. The grandchildren help decorate, circling it from step to step adding ornaments.

Jon's design for retirement has now come full circle in "The Barns." ∞

The Lewises and the Leather

are the major ingredients of this unusual book bindery business which flourishes unobtrusively beside the Ottauquechee.

by ELLISON COOPER

Photographs by EDWARD LINCOLN

HOW DID *you* happen to come to Vermont? It's a question often heard among new residents, and the replies are many and various. The same question asked of Rob't. F. Lewis, Inc., a family enterprise which could be classified as a quality craft-industry, elicits an answer with a nice twist.

It would be reasonable to expect that a business would make the major move from Lynn, Massachusetts to a country location of fields and woods because of proximity to supplies or availability of labor. But in the case of this fine leather bindery, it was a Sunday drive by Robert F. Lewis in 1945 — ending in the unexpected purchase of a double farm in South Woodstock — which determined

The principals of the company are Robert E. Lewis, father and son, and, at right, William Full. They are examining a newly-bound Webster's.

the present site of the business. It now is run by the third generation of the family in the person of his son.

By the time the pleasant, non-industrial-looking plant opened, twelve years had elapsed since that momentous family outing. Young Bob Lewis, Jr. had married a South Woodstock girl, and their own family was growing up on one of the two farms. Horses and riding were to form much of the Lewises' daily background as the family roots reached firmly into Vermont soil. At the same time the establishment and growth of the business involved the Lewises in all levels of the community.

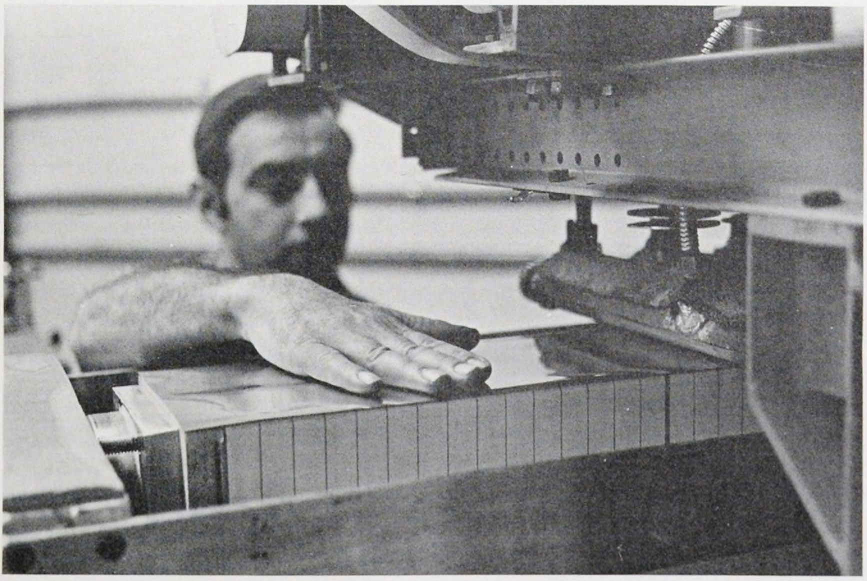
Chance had also played a significant part in the earliest days of the family business. J. Warren Anthony, who was Bob Lewis's great uncle and founder of the firm in Lynn, originally was a jeweler. One day a lady asked him if he could make her a leather draw-string bag. He allowed he would have a try, got some leather, cut it out and came to a baffled standstill. So he gathered it up and took it to his sister who, undaunted, stitched it on her sewing machine. This sensible solution resulted shortly in a small, expanding business in ladies' leather handbags, and in 1904 the Anthony Manufacturing Co. of Lynn was formed.

Mr. Anthony later developed equipment for the manufacture of leather-lined book covers, thereby laying the foundation for the present greatly expanded business. In 1922 the firm undertook the production of leather book covers for the Christian Science Church, and this finely-crafted work to exacting specifications forms a large part of the Vermont business today.

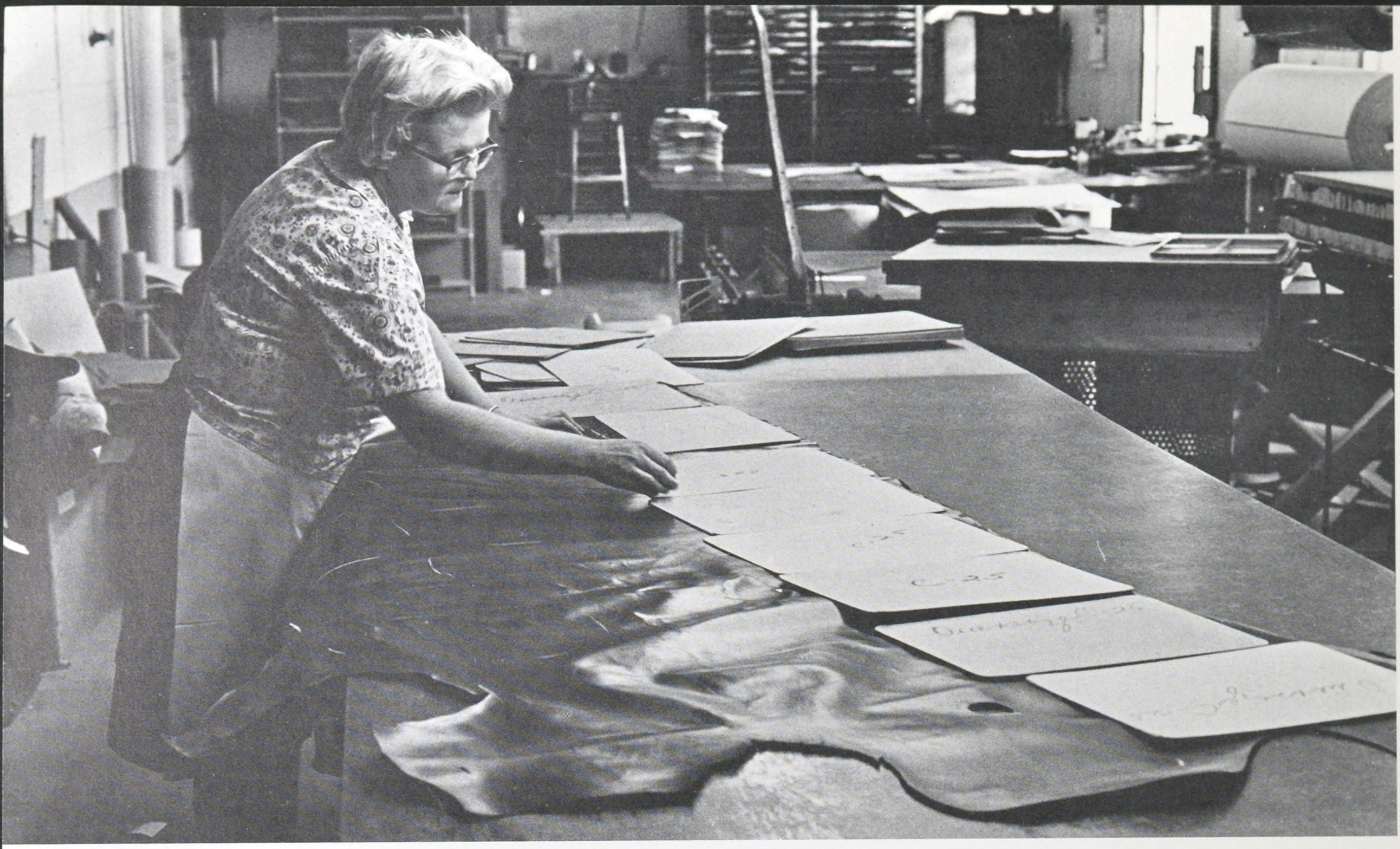
In 1947 Robert F. Lewis, Sr. entered his uncle's firm and was joined four years later by his son, Robert, Jr.

It was the senior Lewis who designed and built the firm's new home in West Woodstock, the Vermont corporation formed to succeed the Anthony Manufacturing Co.

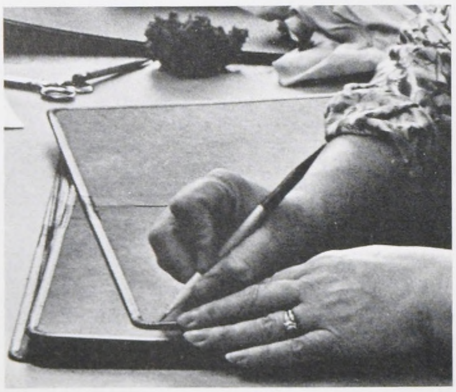
Home is not an inappropriate word for the plant with a domestic air. It stands on a knoll sheltered from the highway by handsome pines and with enviable views



The full operations are done in West Woodstock. They start with sewing the "signatures," and an early step, above, applies gold to the trimmed page edges.



Specially-dyed leathers are plotted, above, for cutting. At far left pieces are skived to proper thickness, and, at bottom left are pasted to binding boards. Sewn books, to the left, have glue applied to their spines. At bottom center a bound dictionary is indexed, and below the spine leather is rolled. The large assembly room, opposite, where hand and machine work is done.



from the many sash windows. The spacious workrooms contain the machinery but, important as they are to the operation of the business, the machines seem subordinate in this case to the people who use them.

Visitors often refer to a "special atmosphere" in the plant. Most of the workers are women, their nimble fingers being essential to production of the finest work. Extraordinary efficiency is achieved by having all workers trained in all phases of the operation, except for heavy lifting which is the province of the men. The result is variety of interest in the work and a justifiable pride in the end product. Carl Wood, Woodstock native, is bindery foreman.

When hiring for the Woodstock plant the Lewises, instead of declaring a work-time policy, inquired of the applicants their preferred hours. Of the many women interviewed nearly all favored a 7 a.m. to 3:30 p.m. workday with a half-hour lunch break. Management fell in line, and from the opening to the present time this is the company's working day. Consequently the firm has a high percentage of long-time service. The ladies can get their children ready for school, their husbands off to work, and yet be home at about the same time the children get home again. They are dual career women, with two daily, full-time jobs.

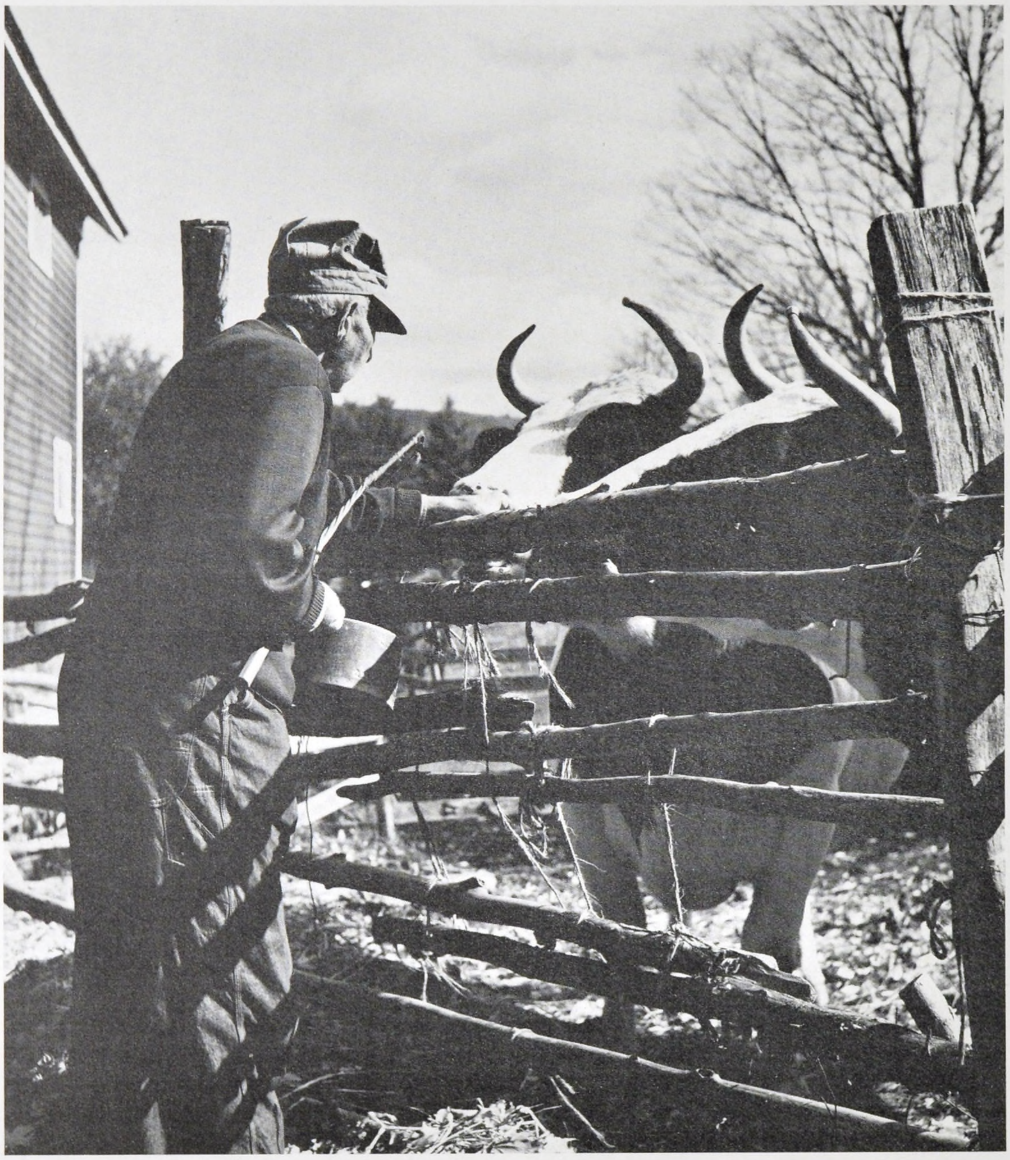
The New England tradition of make-do is well served by a senior member of the firm, William Full, who was with the business in Lynn and moved with it to Vermont. An artisan with an inventive bent, Bill Full has in many instances adapted available equipment to special requirements and, very important in their rural situation, has maintained the machines pretty much single-handedly, thus eliminating endless delays from bringing in "experts" from a distance.

No longer dependent on outside suppliers for finished leather, the firm now processes its own skins. This means a quality control it never had before. Color matching in dyed leather, previously a hit or miss affair despite specifications, can now be as exact as the trained eye can achieve. Customer response has been correspondingly appreciative.

Numerous requests for special-order binding of treasured editions by private individuals regretfully have had to be turned down. Such orders could be filled by the plant only at prohibitive cost, as young Lewis once discovered. So the Rob't. F. Lewis, Inc. operation, for all its skills, poses no threat to the independent craftsman bookbinder.

The recent installation of indexing equipment and further training of personnel has again enlarged the scope of the business. The Lewises, while confident that the quality of their product is equal to and frequently superior to anything presently on the market in this country, are alert to the possibility of further opportunities. The spirit of enterprise handed on from father and great-uncle shows no sign of diminishing, nor does the feeling for life in the country grow less. Through the hot days of last summer when Bob closed his office door on the business world and the long-distance phone at three-thirty or four in the afternoon, he turned easily to the life of the farm and the care of six horses. With his wife Nancy, two daughters, one sixteen and one eleven, and his fourteen-year-old son, Bob cut and stored 1900 bales of hay. His elder son, studying to be a doctor, pitched in whenever he could get home.

If a measurement were possible it would be interesting to stack those hours of hard outdoor labor on summer afternoons and evenings against the shorter hours of city or suburban commuting with their added tension, in terms of value to a small family and business. It might be that the tougher life would have the edge. ∞

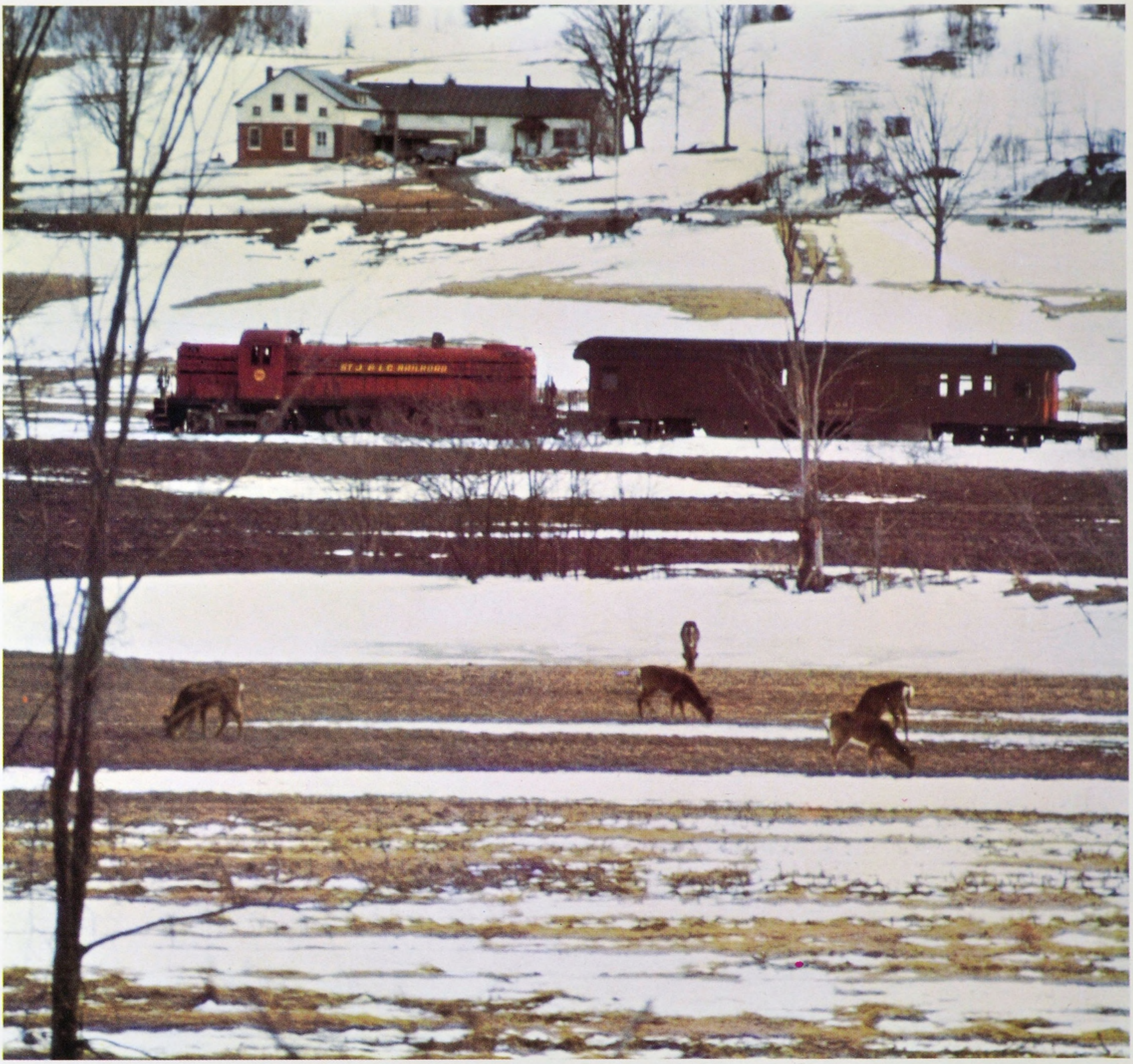


Hesitant spring awakens,
as the long winter
almost imperceptibly
slacks its frigid grip.
But countrymen sense it.

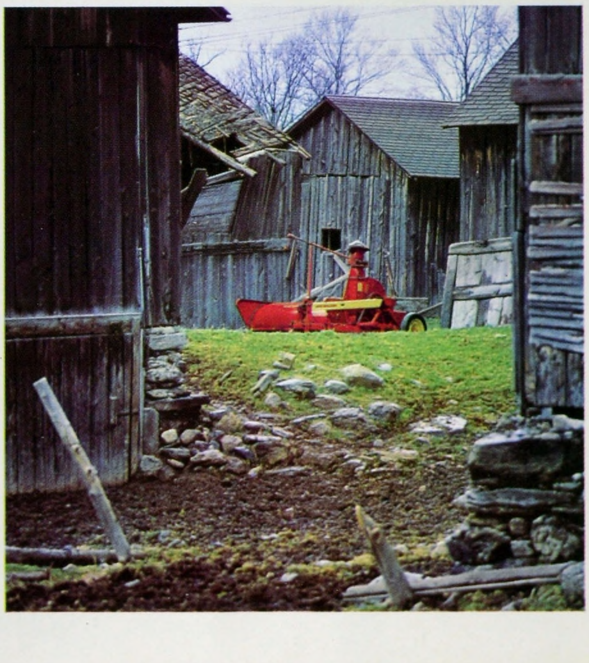
They know that Springtime is coming

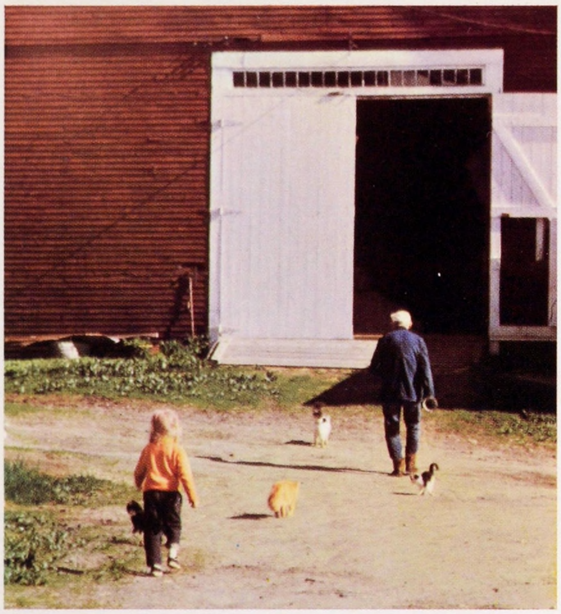
The animals feel it too—in
Putney Charles Townshend's
oxen, by David Plowden;
the horses at a Glover
sugarhouse, by Norman
MacIver; and an early
Pomfret hayride
by R. D. LaSalle.

back again to Vermont!



Deer come down from snowy hills to graze, oblivious of the passing traffic, here filmed near Johnson by Tom Emrich. Soon in many a Vermont barnyard, this scene in Georgia by John Belding, farm machinery is drawn out and made ready against the quickening pace of springtime.

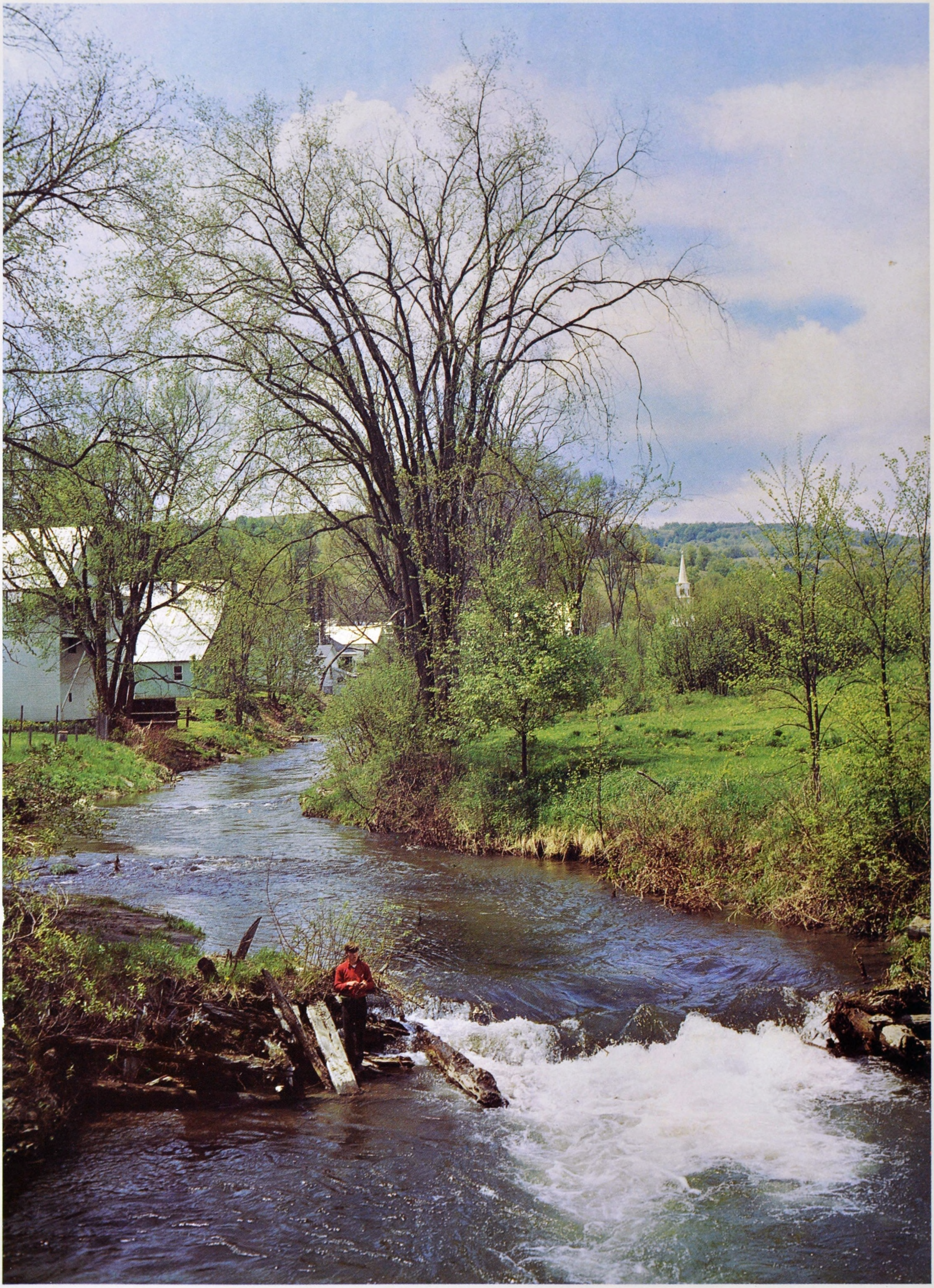




The sun shines brightest on young and old
here at Leo Hutchinson's
farm in East Corinth,
filmed by Hans Wendler.
The fresh new green now
wreathes tree and bush.
It creeps toward the
mountain tops near
Johnson, as recorded
by John Belding.

The rains, too, are part of Nature's need. Here darkening skies, seen by Lud Munchmeyer, approach

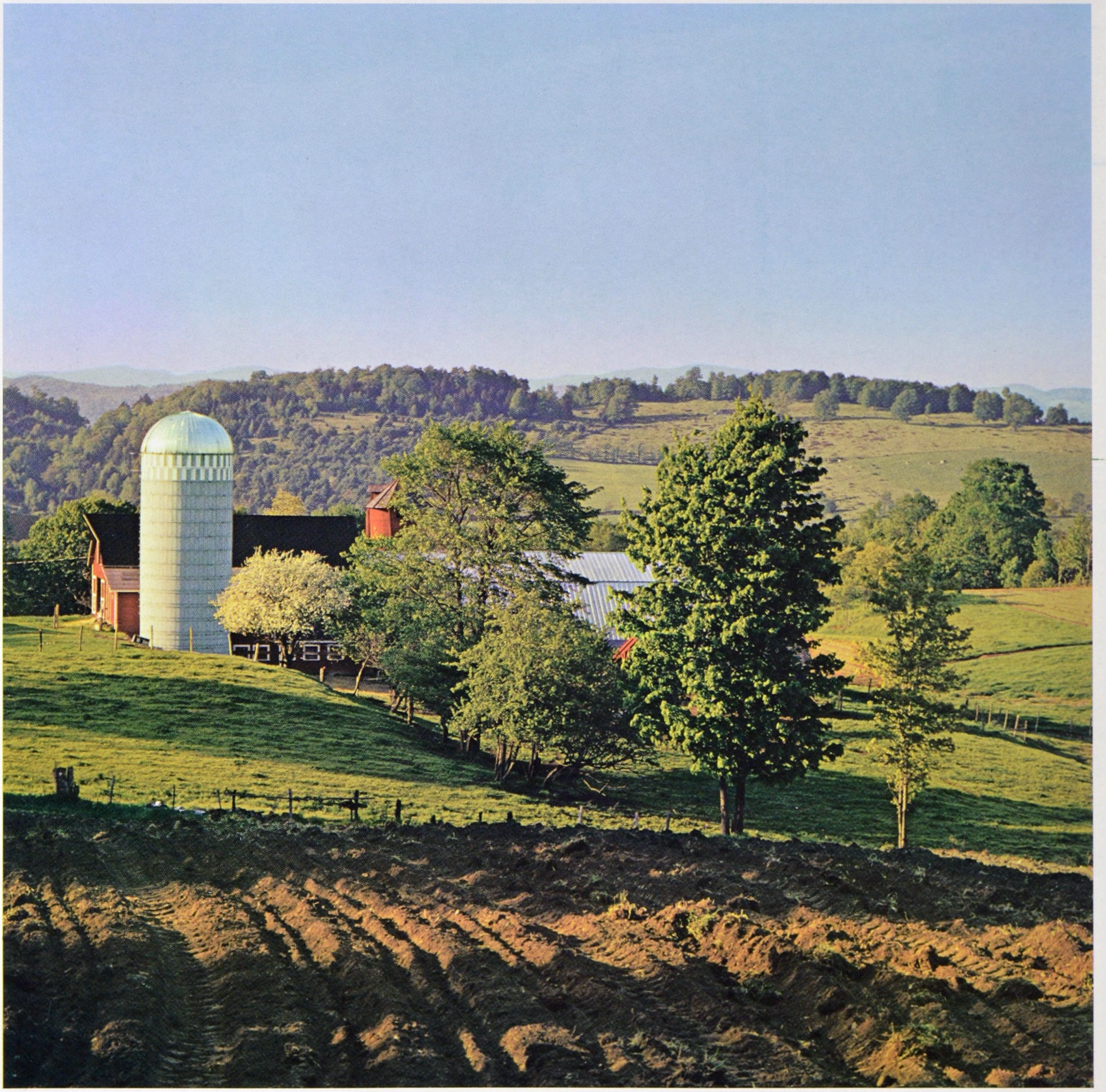
erardus Gosliga's Addison farm. They had passed in Corinth when Hans Wendler caught the sun.



The spring isn't just a time for working on the land. For those rare and precious days come to everyone, when it's more important just to revel in the spell of springtime's beauty.

Here a fisherman is found by Dick Smith at South Strafford; schoolboys, by Edward Lincoln at South Reading; and pasture wanderers by Hanson Carroll.

Slowly the greens of spring assume a richer hue. On his fields the farmer moves with the lengthening days. This is Hartland, by Robert Holland. The fruit trees are in fragrant blossom; again rich soil is turned for planting. Again the spring has almost run its joyous course. ∞



The last word in automated hen houses seems to stretch to infinity.

The Egg and George Devoid

have formed a flyaway, modern partnership in Salisbury, Vermont

by MURRAY HOYT

Photographs by JOHN F. SMITH

IF YOU HARBOR the idea that Vermont egg production is still built around a farm wife with a small flock of "yard hens," whose husband allows her to spend the "egg money" from an old teapot on the pantry shelf, boy have I got news for you.

Would you believe a plant that houses 14,000 hens in sixteen 280-foot rows of small wire cages? A plant that feeds all those hens, waters them, gives them medicine, carries away their droppings, collects better than 10,000 eggs each day from them, some via an egg elevator, and does it all *automatically,* with just the flicking of an electric switch now and then?

You say this would tax the credulity of even that old master of complicated machinery, Rube Goldberg himself? Granted, especially if the automatic care included turning off their light at 6 P.M., turning it back on again at 4 A.M. (to give them a 14 hour production day) warming them in winter, cooling them in summer, doing the feeding 5 times a day each time exactly on schedule, with all this last part managed by time clocks and thermostats which, once set, don't even require the switch-flicking bit. Pretty incredible, right? A dream.

Incredible or not, it's a dream that has come true for George Devoid of Salisbury. His was the first completely automatic egg production plant in Vermont.

He first began to dream of such a thing three-and-a-half years ago. For two reasons he had not thought much about it before that; first, he had been too engrossed since 1946 in building his egg business bigger each year; second, automatic egg plants weren't very practical in their entirety very long before that. Parts of his production were already automatic anyway.

After he did begin to think about it, he took, a little at a time, the steps which would make the idea a reality. And finally, a few days before 1970 started, he moved into the newly-completed 300-foot building, having stocked it with $28,000 worth of hens, and flicked the first of the switches.

Fourteen *thousand* hens means an awful lot of heads sticking up through the wire mesh and turning toward you when you enter the building. The lines of cage tops look as if they had a crop of reddish-brown asparagus stalks bristling up from them; very mobile asparagus.

There are twice as many button eyes examining you as there are heads. There is the sound of subdued clucking, occasionally a raucous bit not subdued at all. But on the whole "the girls" are ladylike in their behavior. The time clocks suddenly start the machinery of feeding, there is a pleased, excited tone that immediately pervades the clucking and the heads mostly disappear from the top mesh and reappear above the feeding trough.

The feeding is done by an endless chain whose carefully-designed links pass through a small feed hopper, each picking up a small amount of specially formulated food from it as the chain moves along into the feed trough within reach of all the out-thrust heads. When the level of grain in the hopper drops, this activates a motor which brings more feed to replenish the supply through a 4-inch pipe, the end of which is suspended over the hopper. The pipe in turn goes to two 11-ton feed bins outside the building. These are kept supplied by a grain truck which blows the product up and into the top of the bin when the main supply gets low.

It takes each link in the chain three quarters of an hour to travel the 280 feet — almost the length of a football gridiron — to the far end, across the end, and down the straightaway in front of another row of hens and back to the hopper. Any feed not eaten, and so brought back by the links, is simply returned to the hopper when that link reenters for its next load.

Each feeding period lasts 45 minutes. But actually each link holds food when the chain stops, and this food remains in front of the hens between feedings. There is usually food still left when the next feeding starts so that for all practical purposes the hens can eat any time they are hungry. The fact that they only eat sporadically between feeding periods would seem to indicate that they are conditioned to the sound of the motor that brings them new food; they start to eat immediately it goes on.

Water is a different matter; you can't bring water on an endless chain. Instead each cage is equipped with a tiny, inch-and-a-half-long red drinking cup about an inch wide connected to a pressure line. Each cup is equipped with a tiny valve. The valve is installed in such a way that when the hen drinks some of the water in the cup she has to push her beak against the valve to reach the lowered water level. The valve, thus opened by being depressed, lets more water in until the pressure of the beak lets up. This shuts off the water.

George says, "They probably start working it by accident; it's designed for that. But in no time they begin to press the valve like experts."

For those of you who have seen the drinking cups in a cow barn, the principle is exactly the same; the only difference is that a cow pushes her nose into her large cup trying to get more water and the hen pushes her beak into her smaller one.

The droppings fall through the wire mesh floor of the cages to the solid floor of a wide pit below. Then once a day, given normal weather conditions, George or his helper flicks the switch that activates machinery which takes care of these droppings.

There are two scrapers on an endless chain mechanism for each battery of cages. One scrapes along the pit floor carrying the droppings while the other is returning above it to the front of the barn. Here it comes down and begins scraping while the first one rides back high. At the end of the barn another crossways pit receives the droppings and another endless-chain scraper system carries them out to a manure spreader.

All this, though, is fairly ordinary compared with the egg collection.

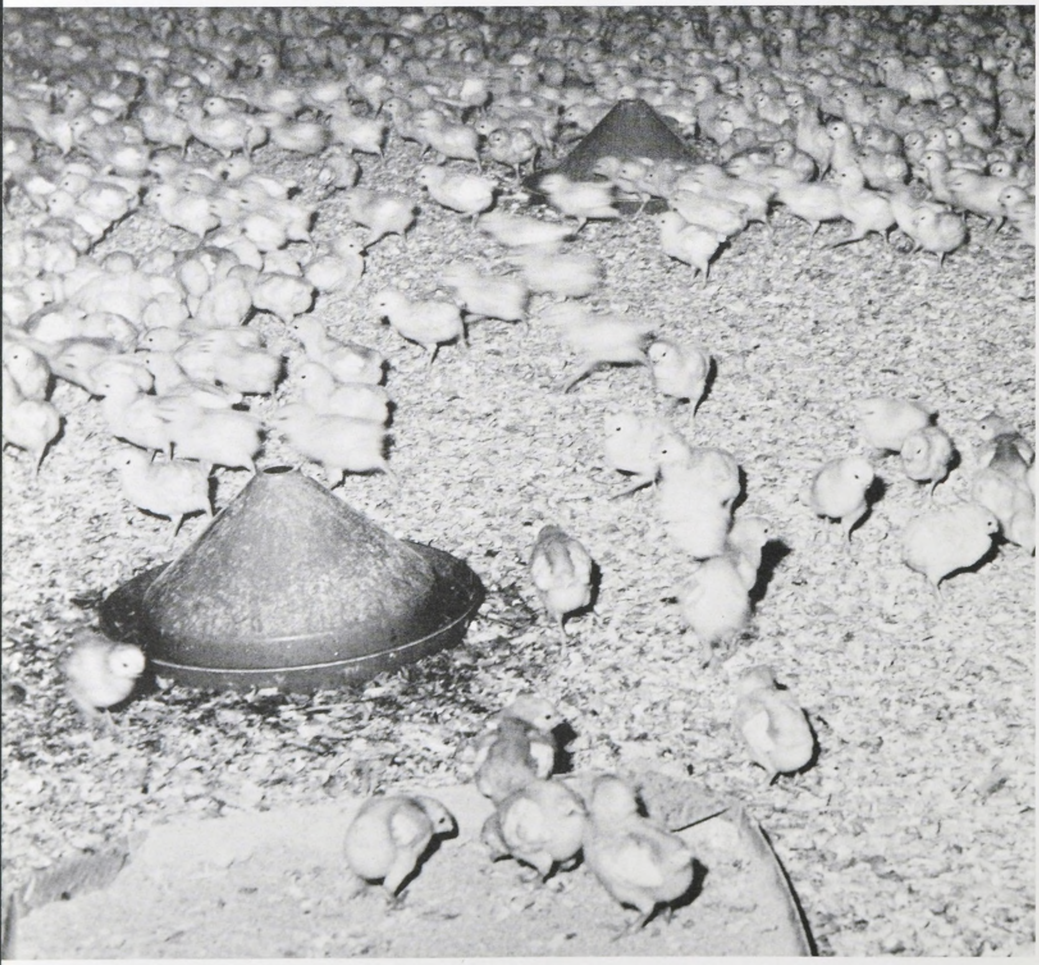
The wire floor of each cage is sloped gently forward. When one of the three hens in each cage lays an egg, the egg rolls out of the cage — the front panel is set just high enough to allow this — onto an endless belt which passes in front of the line of cages.

When George or the employees are ready to collect the eggs, a switch is flipped and a motor starts to move the endless belt. The eggs begin their slow journey to a single collection shelf where carrying baskets can be loaded. All the operator does is remove the eggs from the shelf as they arrive and place them in the carrying baskets. When the belt has made a full circuit (or if for any reason the egg arrivals get ahead of him) he has only to reach up and shut off the motor. Each egg has been tallied by an automatic counter by the time it reaches the shelf.

The eggs on the belt which services the two lower lines of cages in each battery come direct to the shelf. But the eggs from the top lines of cages ride an elevator to get them down to shelf level.

I realize this isn't reasonable; eggs taking an elevator ride on their own? Still, it's true.

The endless belt from those upper two



Day-old chicks from a hatchery, will begin to lay in 20 weeks.

lines of cages abuts a vertical, two-foot-high endless mechanism of cups that hold one egg each. These cups move up and over the top and down, and then up and around again. As they start down, the eggs move into them from the endless collection belt, take their two-foot ride down to shelf level, are let out onto another endless belt and continue to the collection point.

You're thinking just as I did that egg shells are fragile. In automatic collection, eggs roll against each other or the containing rim through which the endless belt runs. When they roll out of the cage they must bang against a solid surface to stop them. The same from the elevator. The breakage must be fantastic.

"Not at all," George says. "The inclines are so carefully engineered, so gradual, the movement of the eggs so slow, that what little breakage we have comes mostly as the result of human mistakes, not from the automatic collection."

To prove his point, a few moments later three eggs slipped from the hand of someone who was transferring them and broke. But although eggs in the machine rolled against each other often, and against other things, the bumping was so gentle that not one of the moving hundreds that I watched was broken or even cracked.

Then there's that matter of medication. Mostly the needed medication is mixed in with the food formula, in whatever quantity the veterinary prescribes. And it is thus given to the hens automatically. But this takes time. The formula change has to be given to the grain company, delivered to the storage bin, then blown into the hoppers and from them gradually carried to the birds.

For an emergency this is too slow. If the medicine can be mixed with water, there is a system of shut-off faucets in the supply line which allows George to medicate the water and thus get what is needed to the birds almost immediately.

Heating is less of a problem than cooling. Heating is controlled by thermostat just as it is for most humans. But a formula had to be worked out by poultry experts of the Extension Service for cooling and changing the air. It added up to the moving of a square foot of air for each pound of bird in the cages, per minute. And fans were installed which could handle the job. The fans also are thermostatically controlled. The 4 inches of insulation in the low ceiling helps immeasurably with both heating and cooling.

Lighting was handled the same way; the amount of light needed by each bird at the cage level was determined by the poultry experts, and outlets planned accordingly.

"There are miles of wiring, what with the thermostats, the time clocks, the fans, the endless belt motors, the feed pipe motors and the lights themselves. Miles. There are 41 motors, 12 time clocks, 7 fans, just to give you an idea."

I have mentioned that the hens in the cages mostly act like ladies. But this might not be so if they hadn't been "debeaked". This means cutting enough from the beaks so that the hen can no longer do her neighbor a severe injury but still finds the beak perfectly serviceable for eating or drinking. Debeaking is considered a necessity when the hens are confined to such close quarters.

"It is done when the chickens are about 8 days old by a service from out-of-state that contracts for the job. The price is 2 cents a bird if the number is what the service considers small, 1½ cents for a large number of birds. With the proper equipment and know-how the job is incredibly fast."

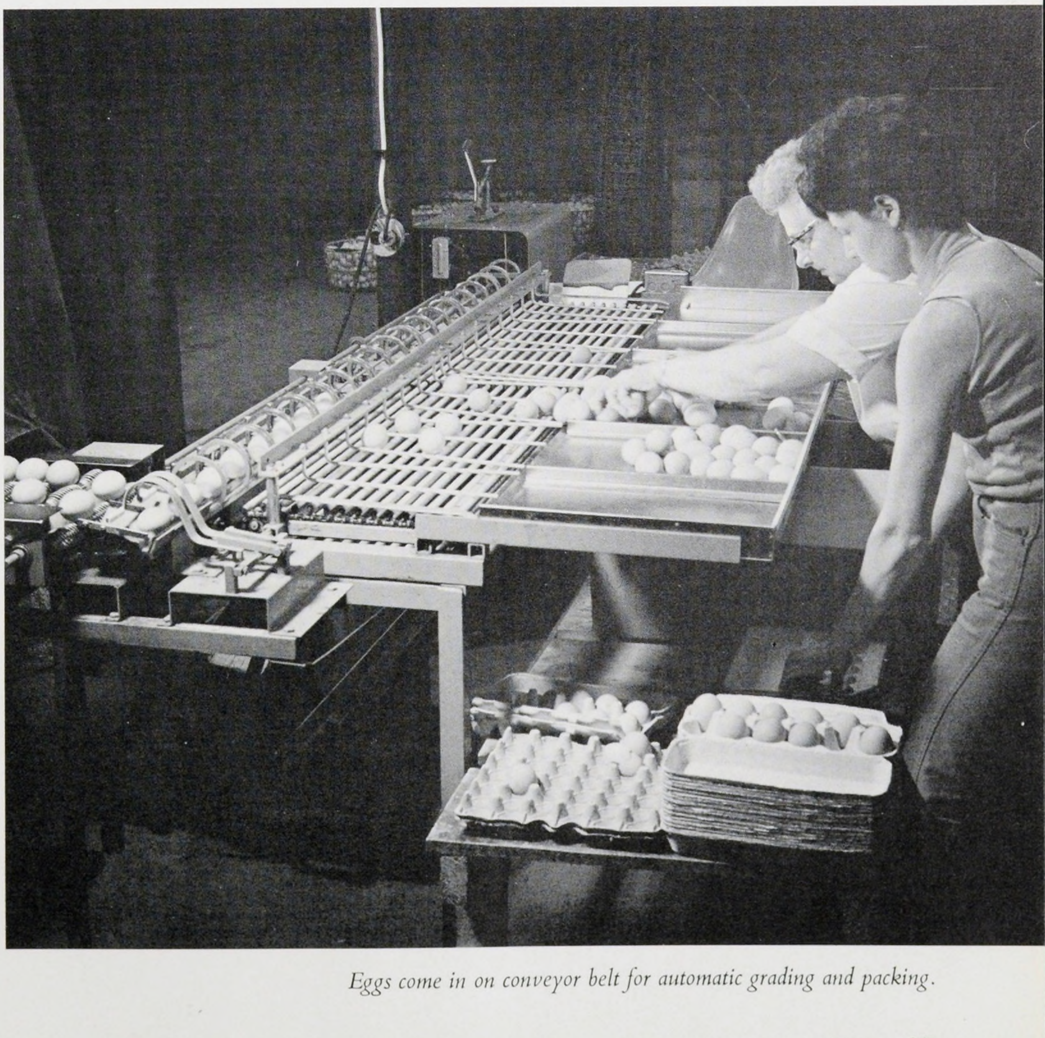
The word "automatic" conjurs up the picture of a man lying in a hammock on a shady porch, a bunch of switches within easy reach, a frosty glass on a small table beside him. A few minutes with George Devoid dispells *that* picture completely. There grows in its place the picture of perpetual motion. George has worked long hours at top speed all his life. He and his wife Lois have had just one two-week vacation in their married lives and that came about because they were chosen delegates to the Farm Bureau National Convention.

"You don't have Friday-to-Monday weekends in the egg business."

In World War II George tried to enlist and was turned down because of a heart murmur that he didn't know he had. So he worked on Navy Corsair fighter planes in a plant in Connecticut, then came back and worked in Burlington.

He got himself 25 hens which he kept on the family place; he delivered the eggs by bicycle. The flock grew to 200 which he kept in an old made-over ice house. But he wanted to have a place of his own. And in 1946, still unmarried, he bought the place that was later to become Maple Meadows Poultry Farm, the one where he is today.

He fixed up the barn for his hens, and



Eggs come in on conveyor belt for automatic grading and packing.

his uncle got him started selling his eggs as hatching eggs to the Hubbard Farms with whom he remained for 18 years. He married Lois in 1947. In 1951 he built a large two-story henhouse onto which he put additions at least twice in subsequent years. Lois taught school and was town clerk, a job which she held until the 1970 town meeting when she resigned at her doctor's insistence.

George drove a school bus for 10 years and worked a sugarbush in the spring. And the two of them plowed back every cent they could into their poultry operation, which grew and grew.

In 1965 they left Hubbard and went to table eggs exclusively. And also in 1965 they had a severe setback; the original barn burned and 1700 hens were lost in the fire.

But they built another two story henhouse to take its place and went on expanding. Both two story buildings are now semi-automatic. The birds are not in cages, but the feeding and watering is done automatically at the flick of a switch, and all equipment at the floor level can be raised on pulleys out of the way so that after a flock is moved, a bulldozer can be brought in to push out the accumulated droppings and layers of shavings. The eggs from these buildings must be collected manually and there are an awful lot of them.

The Devoids added a store and office and an egg room where the eggs are candled to detect blood spots, cracks and other imperfections and then graded. This job is also semi-automatic.

An operator starts the eggs into the stainless steel machine which washes them and passes them on. Another operator sits in a curtained cubicle so that as the eggs pass her, a strong light underneath them will show up any imperfections. A series of spring-like stainless steel fingers turn the eggs as they move along.

They pass from there to the grader and over a series of scales, each set lighter than the last. A very large egg will be heavy enough to trigger the first one, a smaller egg will perhaps pass over several before its weight is sufficient to trigger one. These scale mechanisms let the eggs roll down into compartments. The jumbos roll into the first compartment, the extra large next and so on. From these compartments an attendant packs the eggs in cartons color-keyed by grade. Many of the cartons feature the name of the dairy or store which intends to retail them.

The whole family helps Martin Tewksbury load delivery truck.

During the years, George has acquired two trucks and a third one, larger than the first two, is on order. With these George has set-up delivery routes for the six days. It is amazing that with two panel trucks upwards of 70,000 eggs a week can be delivered, but George does it.

"I think you have to sell direct to the retailer the eggs you produce," George says, "to make a reasonable profit. We've found that the closer we can get to the consumer, the better for us."

April and May are their months of least demand.

"The skiers are gone, the summer campers and other visitors aren't here yet. So we set up our replacement program to give us a new flock starting to lay about the last week of June. Then in March or April we get rid of any old flocks that have been producing for a year or more. Or we force-molt them if they had a good record and bring them back into production again for the summer. We will need to go to 15,000 eggs a day from 10,000 by July this year and we are planning accordingly."

George gets his birds 1 day old from the hatchery. At 20 weeks they begin to lay. By 35 weeks there should be about 85 per cent production from a new flock.

To bring them to laying costs about $2 a bird. As this is written there are 11,500 "boarders" — non-producing birds — being fed at the farm.

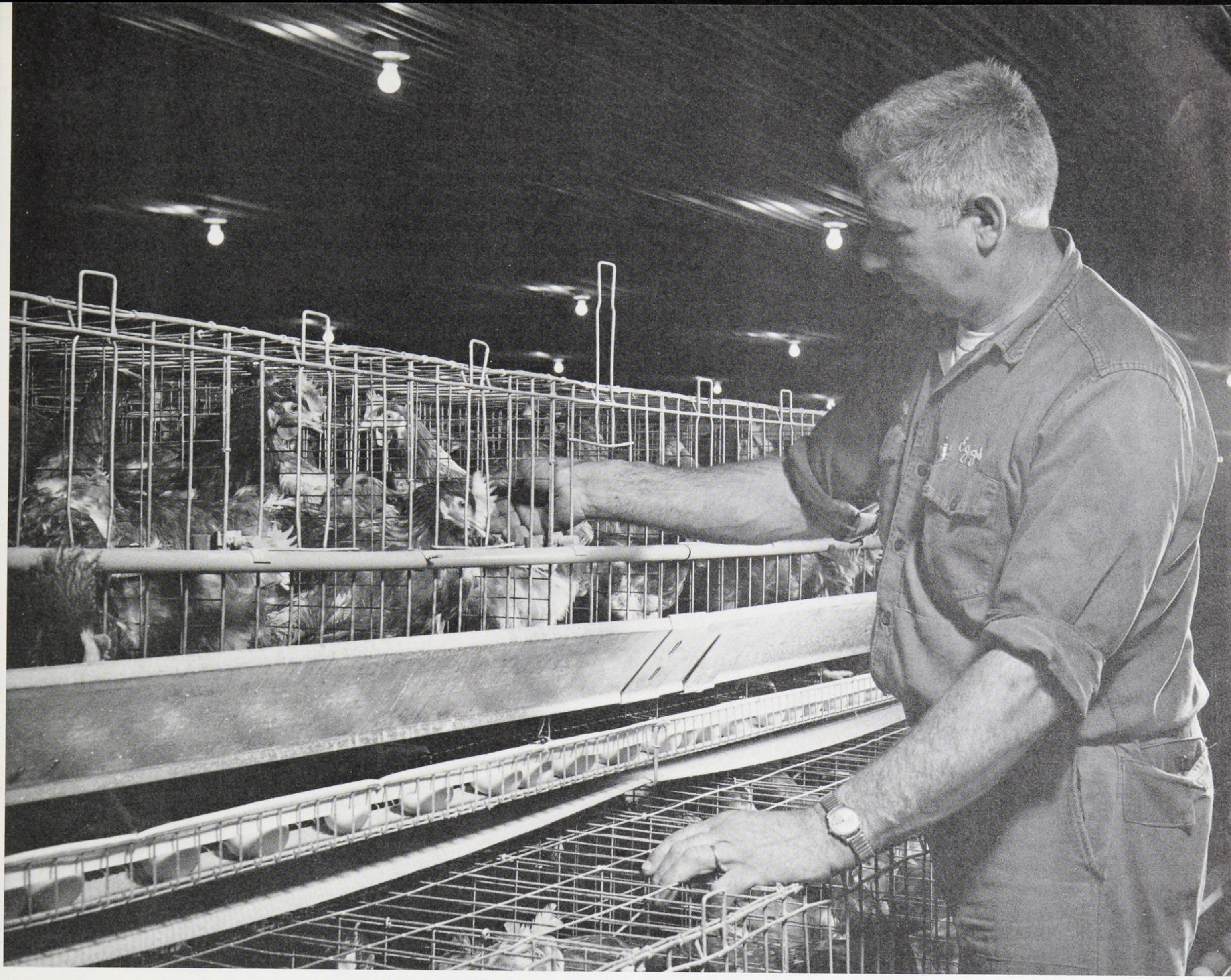
"And there's nothing wrong with their appetites, either. They account for a large slice of our $60,000 a year feed bill."

For a staff, George has 4 girls and one man. When he decides to get rid of a flock he sells them by the pound for meat. At the moment he can get 2¢ per pound more in the Canadian market than he can in this country, and on some 12 tons this is an item.

"The inspections and paper work are heavy for a foreign sale, but it's worthwhile."

George learned what he knows about poultry raising on the job. His was a grammar school education so that there were no agriculture courses in his early years. But he knows where to seek out answers to the problems that have confronted him and he has never stopped learning.

"The University of Vermont Extension Service has been very helpful. If their office didn't know an answer they put me in touch with the right man at Cornell.



George Devoid checks hens in upper cages. Endless belt carrying eggs is just below.

With automation, management's problems multiply where you'd think they'd simplify. You need to be a mechanic, an electrician, a plumber and a lot of other things with automation. I took a course in electric wiring before this last building. When a problem comes up, you have to do something quick."

Recently the shut-off mechanism for the feeder on one battery of cages failed to operate, causing a colossal pile of overflow feed around the hopper. George had to find out why it happened and then figure out a way to keep it from happening again.

"There's never a dull moment. One time our son toddled into wet cement to his knees. He had legs the size of stovepipes when I carried him into the house."

Another time their daughter snapped on the valve of a drinking mechanism the way she had seen her father do to flush it out. But she forgot she was supposed to flip it back.

It was graduation night for one of the boys who worked for them and they were going to the ceremony. But when they went to the brooder house there was six inches of water on the floor and the young chickens were hard put to it to keep alive.

They pitched in and tried to undo the damage, shovel out the wet shavings and droppings, carry away the wet feed. The boy helped until the last minute before he had to dress. George and Lois worked till midnight before they could leave the chickens safely. No graduation attendance for them that night.

With the long hours, plus all those extra hours in time of crisis, there should be no time for anything but egg production in George's life, right?

Wrong. He still runs the sugarbush, tapping 2500 trees. He raises sweetcorn for the market and delivers it to retail establishments with his eggs. And he puts on chicken barbecues for organizations.

"I've tried to give *that* up but they keep after me."

He got started barbecuing in 1954 when the Devoids agreed to help put on such a barbecue for Eisenhower's visit to Rutland. Since then he's put one on each year for Camp Keewaydin and for the Rotary Club's Lumberman's Roundup, and for many other large special events.

You come away a bit awed by the amount of work George turns out and the success of that work You keep thinking, "10,000 eggs a day; 15,000 by July." And in your mind you see all the endless belts, motors, conveyors in that long new building. A dream come true, but somehow you know there'll be other dreams to follow and that they'll very likely come true, too.

Oh yes, I arrived one day to talk with the Devoids after breakfast. I asked them what they had had for breakfast and you guessed it. . . . Eggs! ∽

Except for all that havoc
it caused around Brattleboro

John Gore's Steam Carriage

might have become America's pioneer Model G

by RALPH NADING HILL

Drawing by ROBERT MACLEAN

IT IS CHARACTERISTIC of the only New England state without a seacoast to have contributed three admirals to the Spanish American and First World Wars. It is equally in character that two of its rural inventors furnished wheels for distant cities and waterways. Thomas Davenport's "electro-magnetic machine" was the prototype for the motors of every trolley car and electric locomotive made since. The tiny steamers in which Samuel Morey navigated the Connecticut may be claimed as the first "successful" paddleboats. His additional title to the internal combustion engine has many supporters.

It now appears that early experiments in self-propulsion were made on land in Vermont. The *Brattleboro Reformer* of July 10, 1903, mentions a Toledo car driven in a parade by H.H. Rice, whose elderly passenger, James Amsden was

> probably the first man in this country to ride in an automobile. As far back as 1838 Mr. Amsden rode in a steam carriage built by John Gore of Brattleboro. The carriage was built on the simple plan that is now (1903) used by many makers, and it was driven by power furnished by two vertical boilers of the cylinder type, and the power was transferred to the wheels by a sprocket and chain. According to Mr. Amsden the (rear) wheels were made very much like those on modern (1903) automobiles, only they were much larger . . . about five feet in diameter. . . .

It is doubtful that Amsden was the first man in the United States to ride in an automobile, since Nathan Read of Salem, Massachusetts, and Apollo Kinsley of Hartford, Connecticut, both ran steam vehicles between 1790 and 1800, and in 1804 Oliver Evans drove an amphibious steam dredge through the streets of Philadelphia. In 1769 Nicholas Cugnot of France carried four people on a steam-powered tricycle for twenty minutes at a speed of two-and-a-half miles an hour. James Watt's foreman, William Murdock, drove a steam carriage on the roads of Cornwall in 1784, and in the 1820's Samuel Brown ran one up Shooter's Hill in London. The most successful early experimenter was Sir Goldsworthy Gurney, who was operating steam carriages on regular schedules in England between Gloucester and Cheltenham late in the 1820's and early '30's. These and other predecessors do not diminish the importance of John Gore's Vermont vehicle, an early one in America, and independently designed, though probably bearing some mechanical resemblance to Gurney's contemporary vehicles abroad.

A native Vermonter born in Halifax, Gore was engaged in Brattleboro as a young man in the design and manufacture of steam boilers. From Brattleboro he went to Springfield, Massachusetts where he is said to have constructed engines and boilers for the vessels, plying between Springfield and Hartford, of Chester W. Chapin, a well known figure in early transportation. Also the builder of other machinery for Chapin at the port of New Bern, North Carolina, Gore appears to have capped his reputation as a marine engineer in his work on Commodore Cornelius Vanderbilt's large steamers on Long Island Sound.

Returning to Brattleboro in the early 1830's, Gore was employed in shops on Bridge and Canal Streets in the construction of stationary engines and boilers. He is said to have completed his steam land-carriage between 1835 and '37, though it appears to have been more wagon than carriage, with much of the space taken up by the boiler and the two-cylinder engine. The boiler was constructed of U-shaped tubes one-and-a-half inches in diameter. Engine, boiler, and carriage

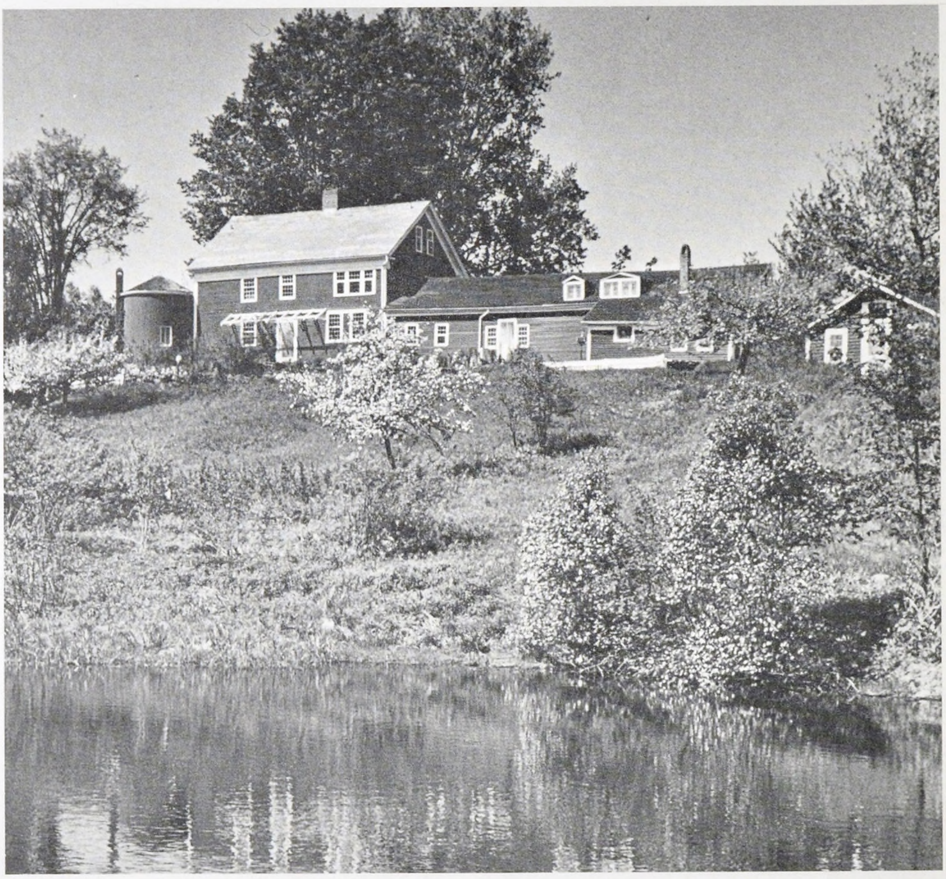
cost Gore the large sum, in those days, of six hundred dollars. Since James Amsden, who claimed to have been his passenger, was born in 1829, he was about eight years old when Gore first took to the dirt roads with his clattering machine, belching sparks from its wood-burning boiler. Under ideal conditions it could achieve twelve to fifteen miles an hour, which on land was flying in the mid-nineteenth century. It climbed hills readily and was driven long distances, hyphenated with stops for wood to feed a boiler none too powerful or efficient (coal-burning boilers had not yet been invented).

Gore possessed, other than a general knowledge of mechanics, mathematics and astronomy, a powerful frame. Tall and rawboned, (like Ethan Allen Crawford with special sympathy for underdogs) Gore accompanied the constable one night to quell a disturbance on Guilford Road at the home of a man whose guests had drunk all his cider and then thrown their host out of his own house. When they rejected the constable's order that they were under arrest and refused to vacate the house, Gore bundled the three of them together like so much cordwood for his steam carriage, and tossed them into the wagon.

In 1856 and '57 he went, partly for the relief of lung trouble, to Fredonia, New York, where he continued to work on his inventions, some of which had nothing to do with steam. Foremost was an adjustable mowing machine box, whose design is said to have been the basis for the mowing machines of the future. Gore seems to have been paid adequately for his boilers and engines, but since business acumen was not among his qualities, he failed to receive proper compensation for his mowing machine and other inventions.

His steam carriage, on the road for about a decade, was defeated primarily for a reason he had not anticipated: at the sight of it, or the sound of its huffing and puffing, every horse in the vicinity bolted. The selectmen of Brattleboro were forced to order it off the road, unless a boy ran ahead ringing a bell. The carriage's last journey from Bernardston, Mass. to Brattleboro ended in a ditch, its inventor remarking, as he climbed out of the wreckage, that it could remain there. The engine, however, is reported to have been salvaged and to have served for several years to run Jonas Cutler's bakery.

Gore died poor in Brattleboro at 75, not quite forgotten, like so many other right men at the wrong time. ∽



THE OLD TOPPING TAVERN,

snug in its sequestered rural setting, still keeps its charm as a museum.

by James D. Sage

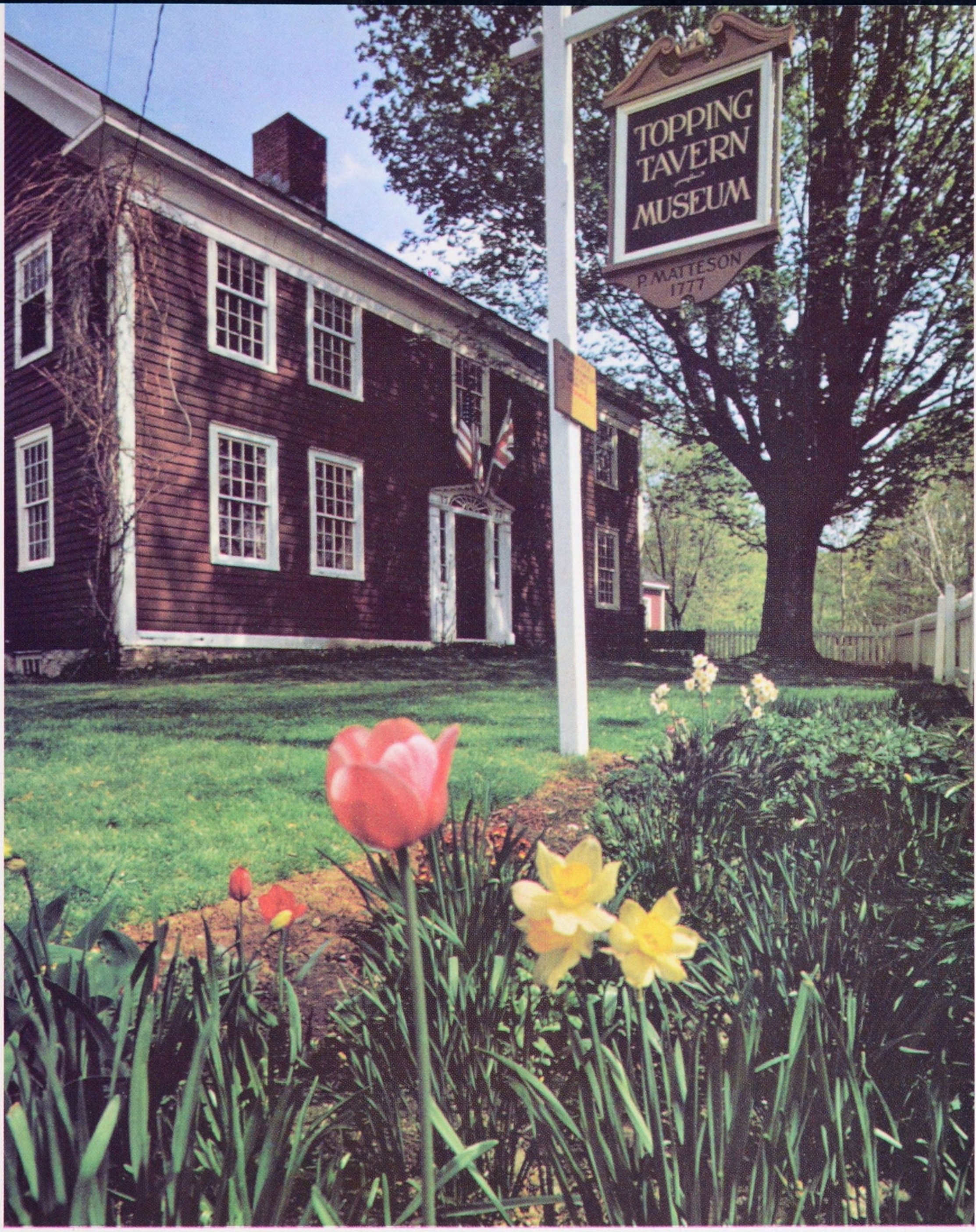
Photographs by Sonja Bullaty *and* Angelo Lomeo

Certainly, a great deal of the charm of Topping Tavern has to do with its setting. Fine, old trees shelter the main house. Herb and flower gardens flank the outbuildings. Rolling meadows fan off to all sides. A pond fringed with willows lies at the bottom of a gentle slope, the haunt of many birds. In the distance are the low-slung hills of the Shaftsbury wilderness, leading the eye to the fainter outlines of Mt. Equinox and Dorset Mountain. It is bucolic and it is beautiful.

What could be more suitable than an 18th Century inn at the turn of this back-country road? Well, absolutely nothing. The tavern is the larger of several connecting buildings, and one of two presently open to the public. Two flags, one American, one British, hang above the fanlight of the main door, and serve to recall the former owners: the Mattesons of Vermont; and Beatrice Gosford, wife of the fifth Earl of Gosford, late of Ireland. Surprisingly, it is a combination that has worked out well.

Now, Topping Tavern has a new owner, and it will probably be its last. In 1966, Lady Gosford died, and her home and its contents were bequeathed to the Bennington Museum. It is they who have taken on the complex task of transforming a home into a museum. The operation is not always successful, as the personality of a home usually loses out to the specific requirements of a museum. But even with the addition of cheerless, glass security walls, and neatly arranged, table-top tableaux, the charm of Topping Tavern survives. A great deal of the credit is no doubt due to the good taste of the Museum and its curator, but the inn's former occupants are the real guiding spirits. Lady Gosford, of course, collected most of the antiques that fill these rooms, and the outbuildings as well. But there are Matteson touches here, too, such as the portraits of third-generation Mattesons flanking the fireplace in the front parlor. Their strong, young faces peer serenely out of gilded frames. Together, such touches add up to a very personal and friendly ambiance.

The two-story clapboard tavern is one of the oldest buildings in the state. It was built by Peter Matteson in 1777, the year of the Battle of Bennington. For nearly a century, the Matteson family operated it as an inn, and it was a familiar stage-coach stop. But in the 1850's, the coaching business went into a decline, due to the expansion of the Western Vermont Railroad. The Mattesons closed their inn and concentrated upon farming instead. In 1926, their descendants sold the property, and it entered its British period.



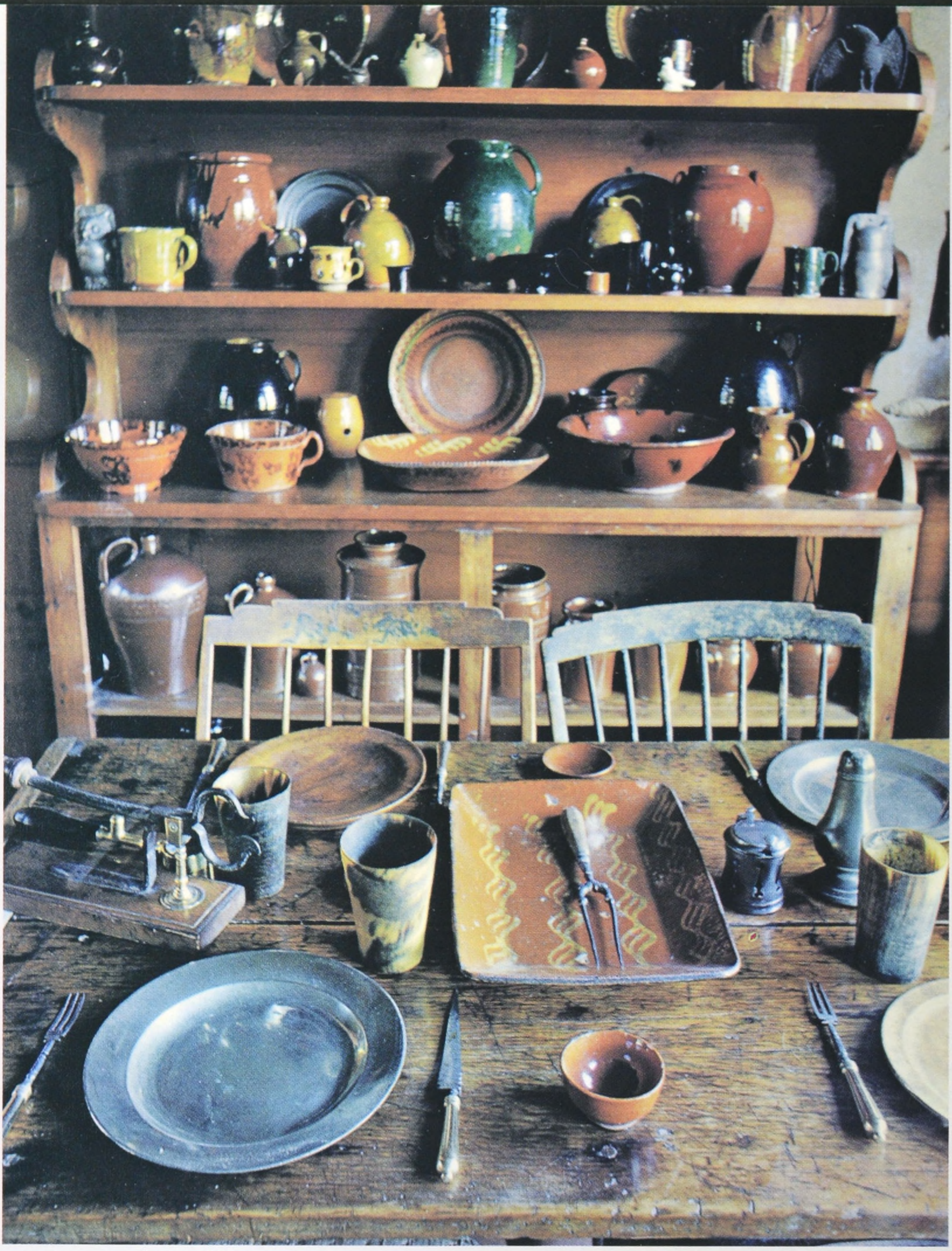
Not far from busy Rte. 7 the old Glastenbury stage road passes the Tavern's welcoming front door. Behind it, opposite and below, lies a pond that the spring hylas favor.

Enter Lady Gosford. It was she who described the building as "Simply topping!" not the only Wodehousian touch she would bestow upon her property. The upstairs ballroom, for instance, contains graphic reminders of parties given in summers now long-forgotten. Her guests, often artists and writers, were encouraged to doodle on the hunt-scene wallpaper. With a little guidance, it is possible to make out the fine hand of Grandma Moses, Luigi Lucioni, Dean Fausett, and others.

Set before a window in what was once Lady Gosford's bedroom are elements of a portable altar. This was used for outdoor Episcopal services, given in one of the nearby meadows, every summer for many years.

There are interesting touches throughout the house. One of the main downstairs rooms has been arranged to suggest the way the tavern looked in the early 1800's. Visitors, however, appear more interested in the bar (new) than in the furniture (old). The movable grill is the carefully-researched handiwork of Topping's curator-in-residence, Dudley Blakely. A gentleman of many talents, he once painted diorama backdrops for the American Museum of Natural History, and designed coinage for the Tongan government.

In the parlor, children will enjoy touching the slippery horsehair chair. As yet, it has not been embalmed in glass. Adults should take note of a corner-cupboard filled with a rare and unusual collection



The Tavern's inviting kitchen includes fine old pewter and a rare collection of early slipware pottery. Museum outbuildings, now newly arranged and open for public inspection, include (below) many implements used by the blacksmith and cobbler.

of tortoise-shell plates, made in Staffordshire in the 18th Century.

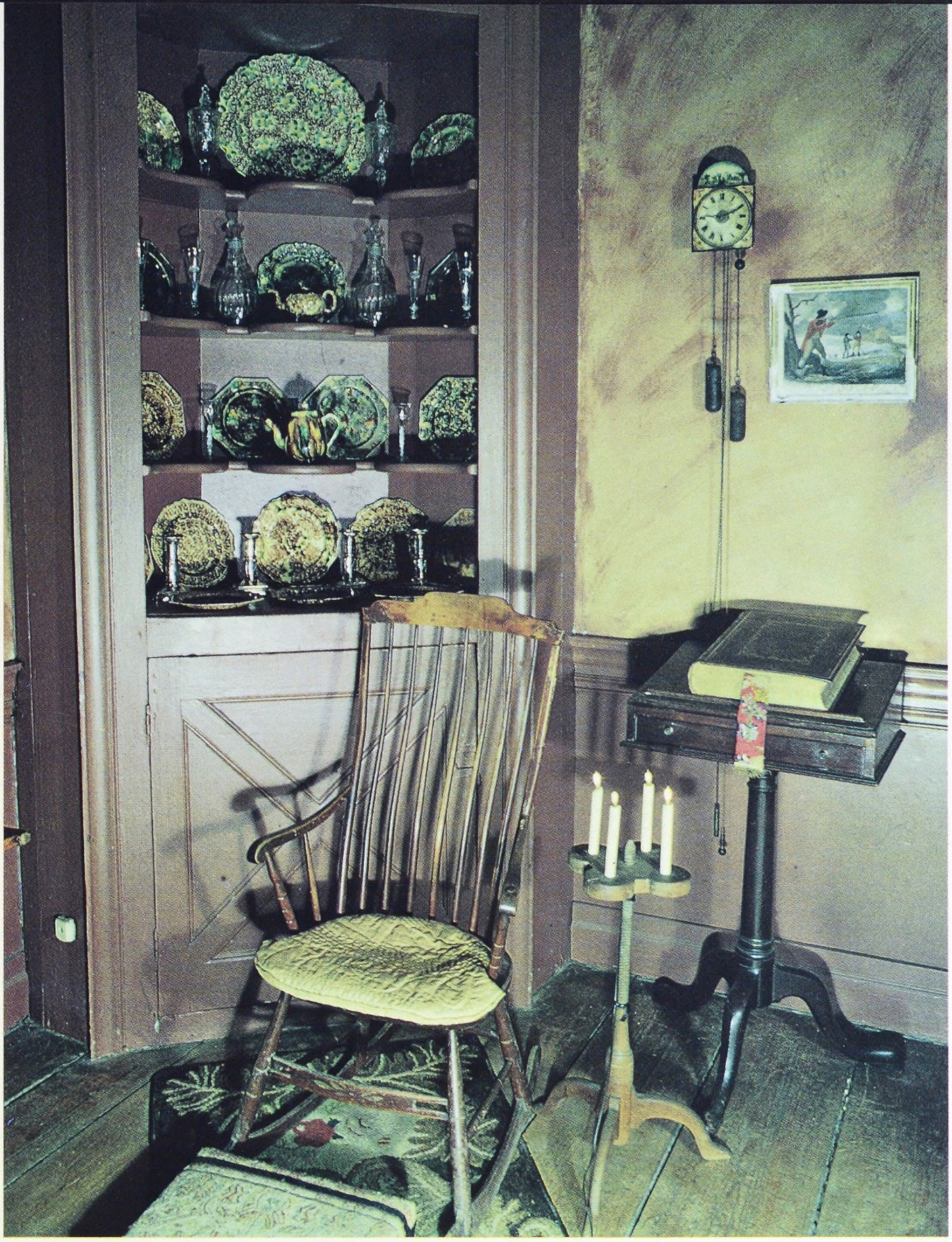
The kitchen is cluttered and inviting, as country kitchens should be. One of the tables has been set with antique pewter tableware. A breakfront behind houses a valuable collection of early American slipware. The main stack of the fireplace, by the way, serves both the kitchen and the parlor.

Half of the upstairs is taken over by the ballroom. A portion of it was once the Earl's bedroom. A hanging wooden partition, a true product of Yankee ingenuity, can be lowered to turn the long room, just right for two square dance sets, into separate quarters for male and female visitors desiring to spend the night.

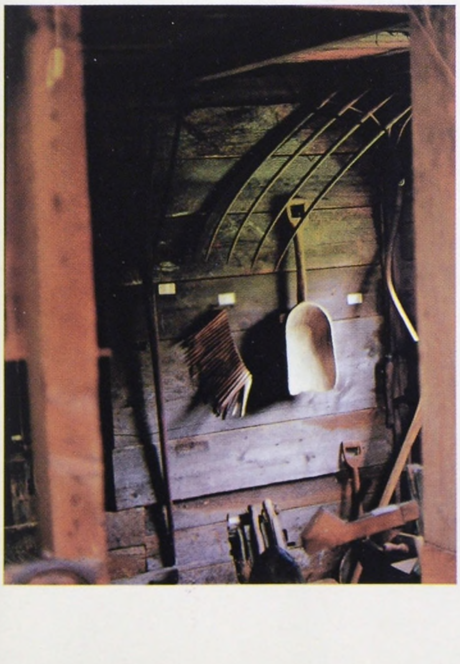
Off the ballroom is what the museum refers to as a "Musician's Gallery." Actually it is a small landing at the head of the stairs, where the players supposedly assembled. Whether or not they did, it is one of the most attractive spots in the tavern, mainly due to the stenciled walls, a later addition, but quite in keeping with the period.

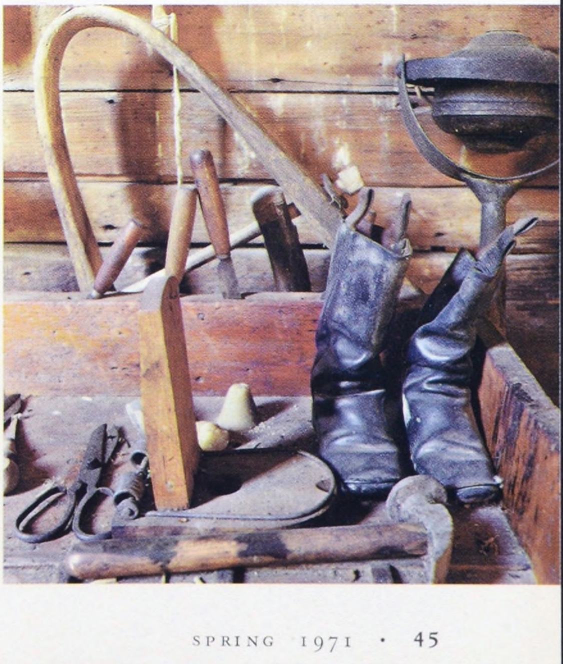
The front bedroom is now a clutter of early American furniture, prints, and assorted objects. To this the Museum has added a collection of correspondence dealing with the Gosford family. Oddly, what attracts the eye are the simply carved valances, with cutout designs in the shape of peacocks. Each tail is a folded paper fan.

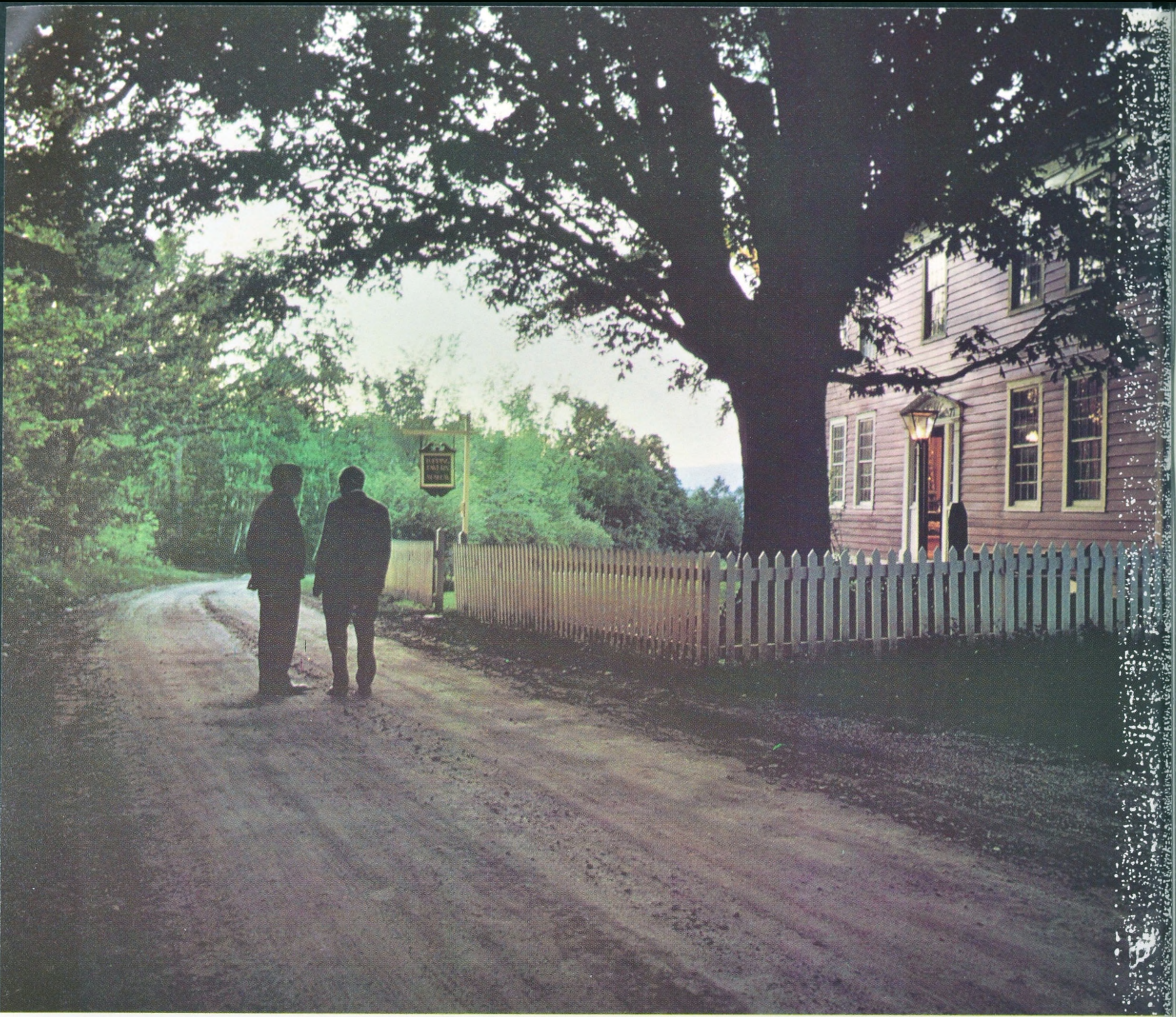
Another bedroom is situated off the ballroom. A nearby closet has been turned into an exhibit case of antique



The Tavern parlor, at right, houses a prime collection of Staffordshire in the corner cupboard, as well as the furnishings of a later era. The many tools, arranged now for showing, below, include extensive groups of early farming implements.







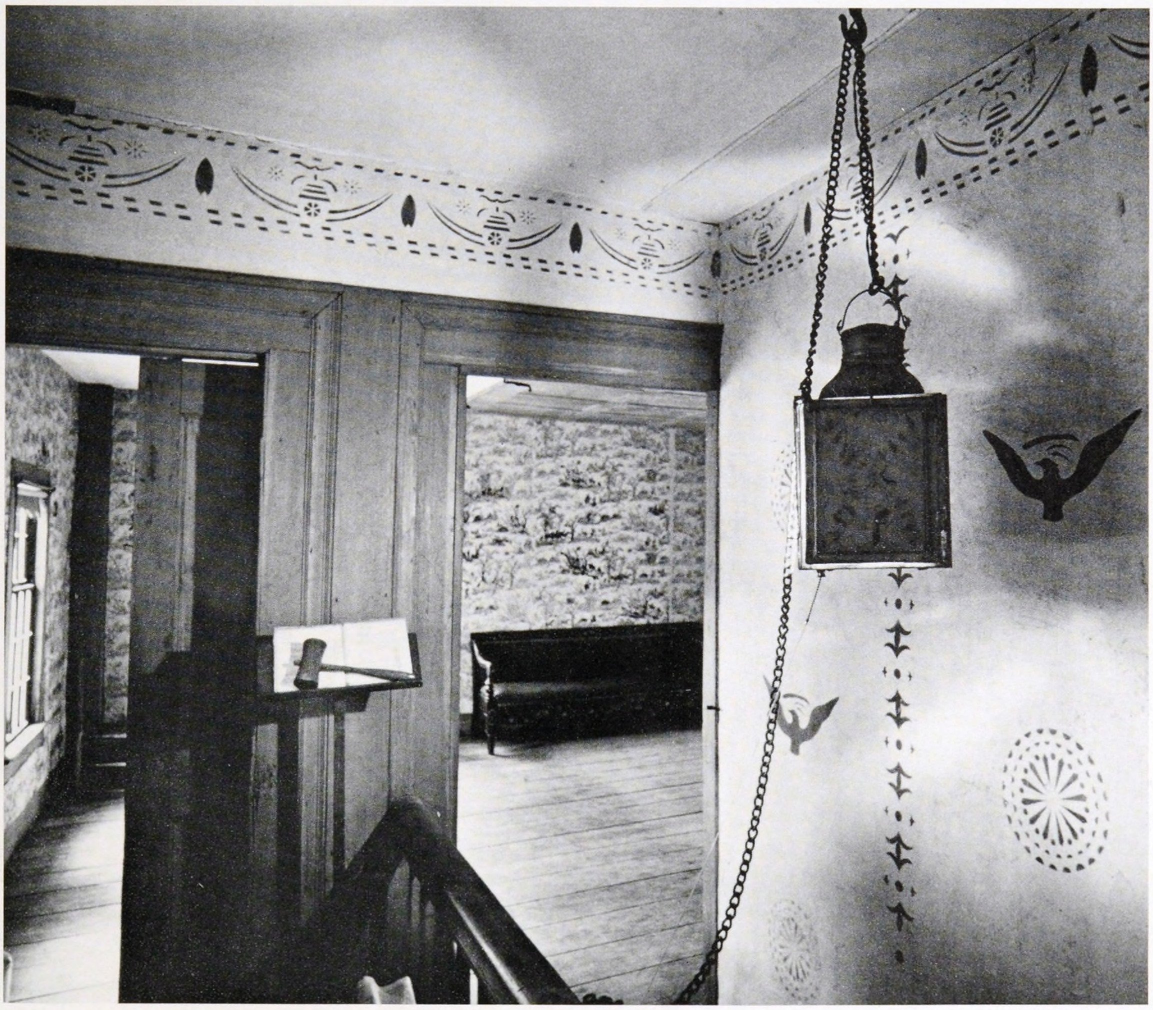
dresses and bonnets. A back stair leads directly to the kitchen. Actually, it goes even further, to a white-washed basement, complete with iron washing equipment, and a bottleless wine cellar.

* * *

Topping Tavern Museum is located ten miles from the Bennington Museum on East Road, which turns off U.S. Route 7 just north of South Shaftsbury Village. It is open, including holidays, from May 1 to October 31, weekdays and holidays 10-5, Sundays 1-5, closed Mondays. From November through April it is open by appointment only.

* * *

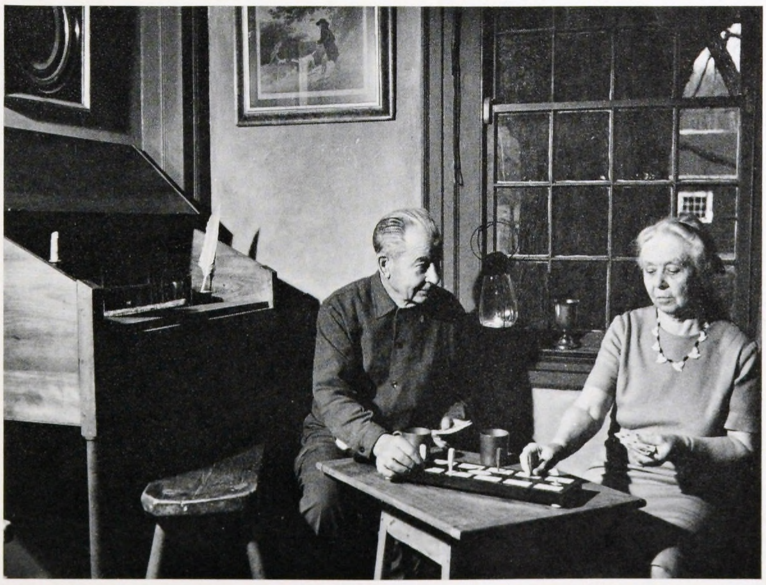
Some of the more interesting areas of the homestead this year will be open to the public. One of the outbuildings

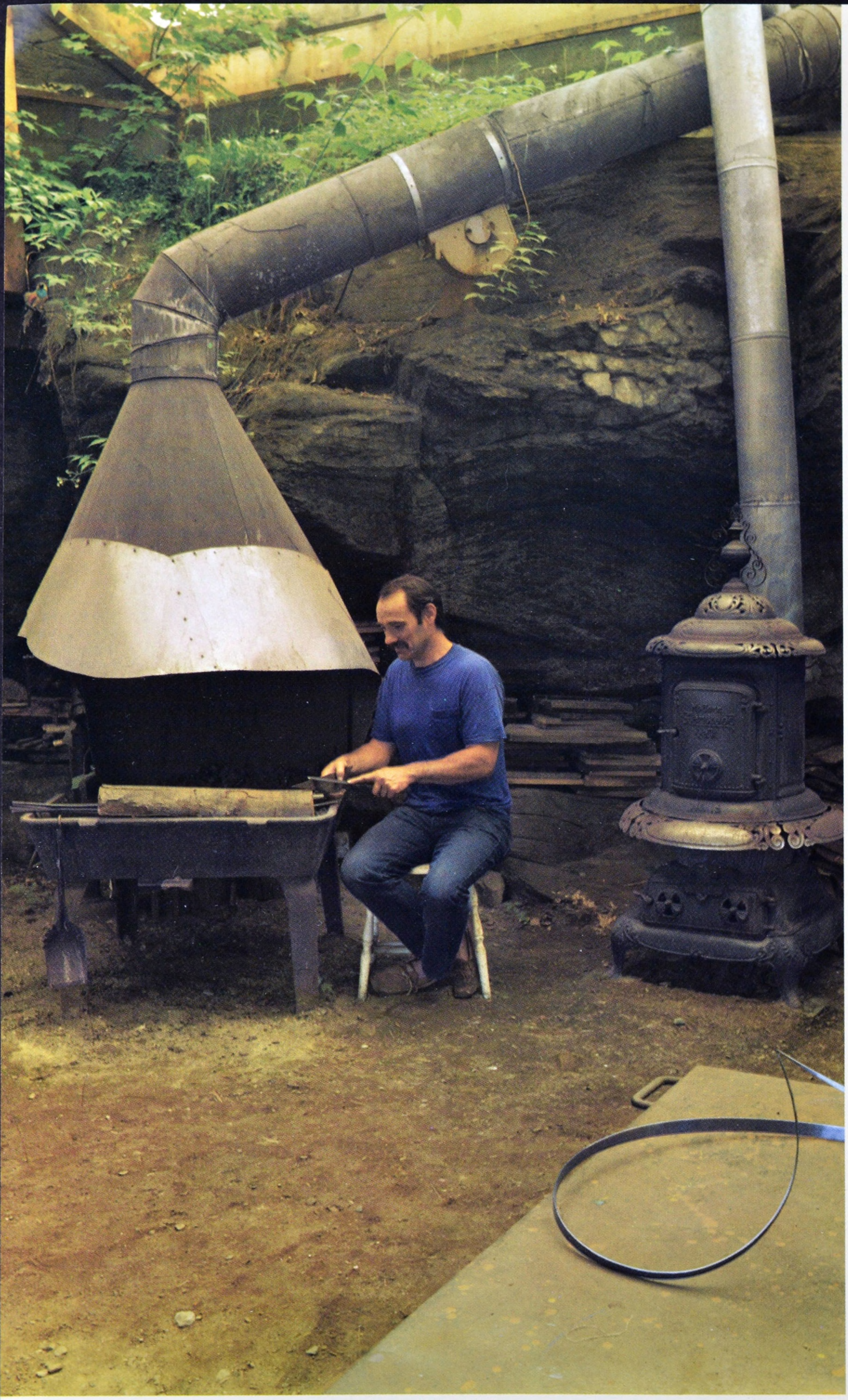


The Tavern is inviting today, as it has been for almost 200 years. At left below is an unusual Grandma Moses autograph. To right is the divided upstairs ballroom. Below are Museum's curators, the Dudley Blakelys.

contains a blacksmith and cobbler's shop. It is a wonderfully dusty building, with an amazing collection of surrealistic farm implements, decoys, wooden lasts, iron wheels, anvils, a forge, grinding wheels, and so on. All these items seem to fall naturally into little groups, forming a collection of still lifes. This building will be opened for the first time this spring.

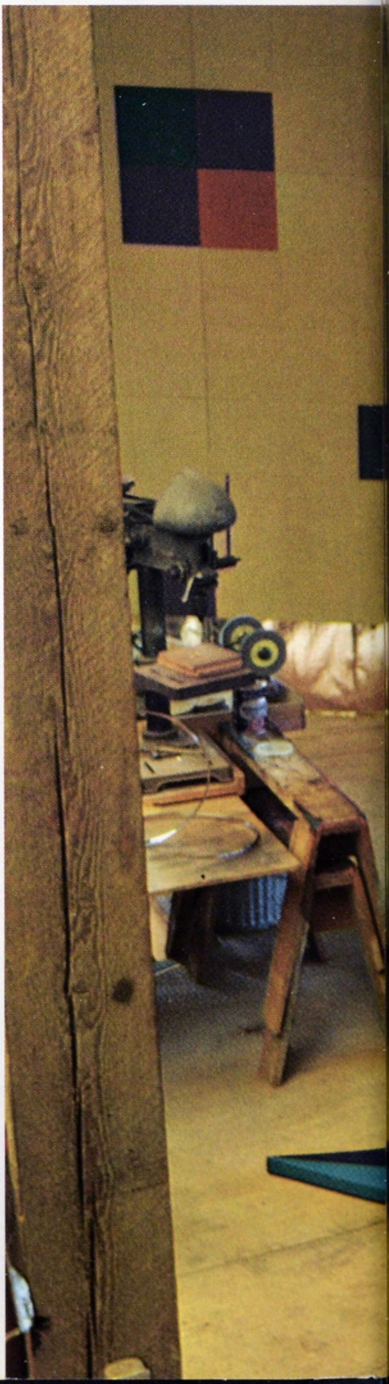
So Topping Tavern continues in its state of pleasant evolution. The personality of those who have lived or visited here, plus its own long history as an inn and home, and now a museum, give it a very special quality, one that is readily apparent to even the most casual tourist or lover of Americana. It is warm, it is inviting, it is interesting. Perhaps, after all, Lady Gosford's description of it was the most accurate . . . ∽





Set against a natural ledge, Ogden's large, skylit workshop has its forge and stove toward the back. Windows look past the quiet village.

FORGING A



NEW TRADITION OF SCULPTURE

Sam Ogden, Jr., fashions flowing, geometrically-inspired art objects in metal

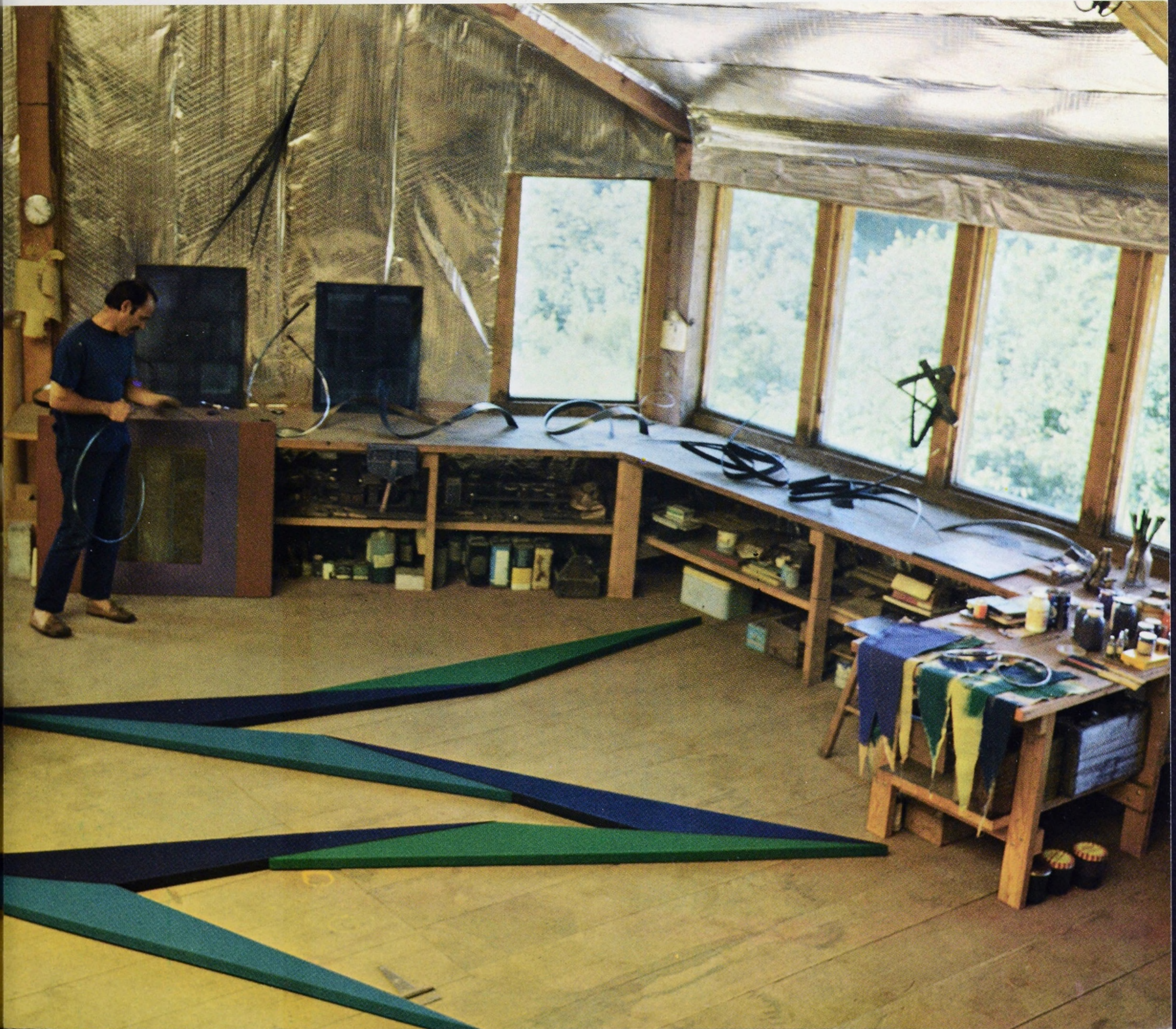
by NORMAN RUNNION

Photographs by
CLEMENS KALISCHER

WITH VERMONT'S myth-like reputation for the quaint and the old, you might expect to see The Village Blacksmith in his shop shoeing a horse, with a wagon parked outside under a maple tree. Such scenes are part of the state's mystique, but they also are practically non-existent.

Yet, in Landgrove, blacksmithing still goes on, and there is even a wagon parked at the home of one of the village's two blacksmiths. It is, however, a Volkswagen. Sam Ogden, Jr. owns it, but forging horseshoes is hardly his line. Instead he turns out works of art — delicate, shimmering twists of metal, or graceful sheaths that stare at you from surprising places in the high grass behind his home.

The other Landgrove blacksmith is Sam Ogden, and that's all part of the story.



Much as people might like to have blacksmiths around, for the sake of nostalgia if nothing else, there is no great, crying need for the village smithy these days. But Sam Jr. makes a living in a blacksmith shop, using not the smithy's jobs but his tools. As a sculptor he has found a medium that is as satisfying as the artist's palette or writer's typewriter.

"Steel and iron are something you can come to terms with," Sam Jr. says.

At this point it is necessary to separate the Ogdens. Samuel R. Ogden, Sr. is the fellow who is writing his column elsewhere in these pages. He lives across the bridge, and just up Landgrove's unbustling main street from Sam Jr. and is, among other things, a blacksmith too.

Furthermore, he is a gardener and newspaper columnist. It is not a case of like-father-like-son, because Sam Jr. neither gardens nor writes for newspapers or VERMONT LIFE. This is a seemingly minor distinction, but the fact is that both men have made, or are making, their separate impact on the state's culture.

The reputation of Sam Jr., who is 45, also is spreading outside the state. His sculptures are sold in Arizona where he once taught, in New England galleries, and form part of the interior decoration in, of all places, Barney's in New York — Barney's on 17th Street and 7th Avenue, which describes itself as "America's Largest Clothing Store For Men And Boys."

The Barney's commission is a good example of the ways and wherefores of Ogden's art. A friend, the architect for remodeling the store, asked Sam to create three sculptures for placement in windows, each in a recess or tunnel of a wall. What his mind and his hands produced was a square, a sphere and a tetrahedron, creations based not on an abstraction but on logic.

"Once I set up my premises, I try to follow through with them," he explains. "In this case I used geometry. There were three windows and therefore three dimensions. I decided on the basic geometric forms of a square, a circle and a triangle and passed planes through them — one for the circle, two for the triangle and

three for the square. Thus I had a cube, a sphere and a tetrahedron."

Each object, painted orange, is suspended in a louvered tunnel 20 feet from the outside of a window, and moves constantly in the normal circulation of air. The result: "a piece of motion."

Mathematical logic forms the basis of much of Ogden's art. Take a rectangular piece of metal, for example. To him, it is logical to cut the rectangle into two equal triangles, and then to shape, weld, file and polish them into graceful, complex designs. Yet if the finished product were taken apart and put back into its original form, it would be, once more, a mere rectangle of what he calls "ordinary, garden variety steel." It sounds simple and that's the point.

"In a piece like this," he explains, "you set up a very simple thing, and then point out how complex it is." Thus the Barney's commission was based on what he calls, with a smile, "my childish premises."

This commission also triggered some soul-searching on the future of Ogden's art. How does an artist come to terms with himself and his work and his world? Putting it another way, Barney's is far removed in both time and space from what Sam often calls the "self-indulgent" world of fine art.

"How do you justify working for an institution such as Barney's?" he asks. "But why get into that? Then again, it puzzles me. Essentially the store is buying sculpture, and I'm furnishing it as a work of art, not as a piece of decoration. It will be seen and enjoyed as a work of art."

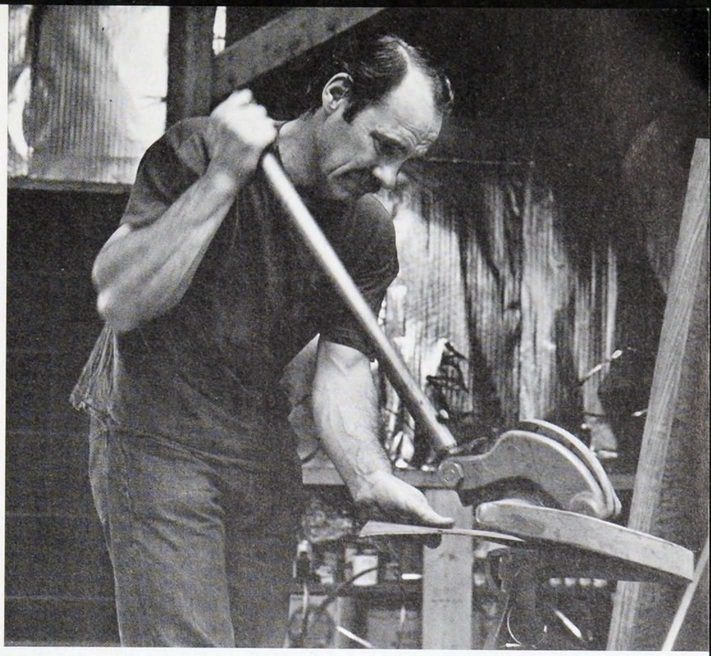
Therefore, in the context of Barney's, it will be something of use. "I'm getting to the point where I hate to make things that are not useful," he says. "I would like to make something that would power a generator. When you do sculpture, you wonder about your own motivation. I think you have to get rid of self-indulgence. I don't want to use that overworked word, 'relevance,' but maybe something very valuable is being missed if artists are operating only on an esthetic, functionless level."

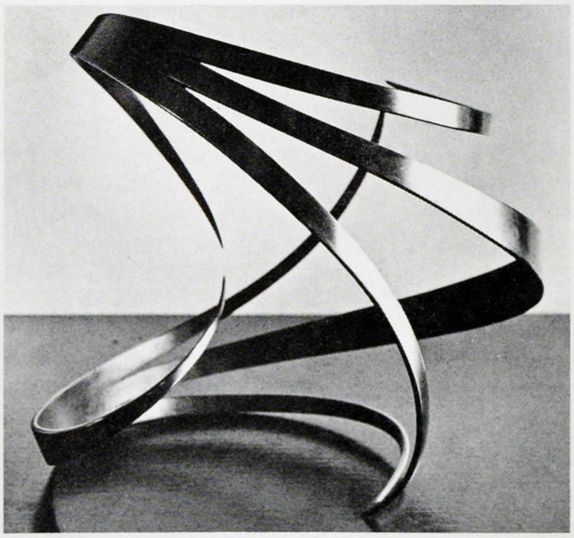
Thus, in his mind, a door latch turned out on his anvil might have more true artistic meaning than a welded, polished triangle sitting as a "piece of art" on some patron's coffee table.

If this be the case, then Ogden is perfectly capable of turning out door latches. He has been doing it for a long time, far before he became a sculptor. He learned the craft from a master blacksmith — his father.

"When my father was a child his summers were spent on a farm, where they

The angles of attachment in joined pieces sometimes are modified from original plans according to new ideas developed during assembly. Conventional cutting and bending tools are used in part. Large pieces often require floor assembly.





Sam's children find a great fascination in the shop's activities, and as much around the Ogdens' woods-girt home above it. Typical of Ogden's sculptures is the one-piece, curving design at right.

had a blacksmith's shop for repairing farm machinery. When he got involved up here in renovating houses and barns, he set up his own blacksmith's shop, and that's where I learned. It never occurred to me when I was young that it was anything to do for a living. I wanted to be a writer."

Samuel R. Ogden, Sr. moved his family to Landgrove from New Jersey when Sam Jr. was 5. As a youngster, he attended village schools, then went to Phillips Exeter Academy. During the war he served in the Navy as a flier, and afterward enrolled at Princeton to study French and English literature. "I was arrogant enough to think I could write," he says.

The serene world of Landgrove seemed a suitable place for a writer to work, so he came home, and combined working with his father in Sam Sr.'s blacksmith shop with attempts to write.

"I worked for three intensive years with my father," he says. "I learned a hell of a lot about manipulating iron and steel. We did functional things mostly — you know, hardware type items. I also did some arty-type things such as candleholders. All the time I was getting better and better at manipulating iron, and I was enjoying it."

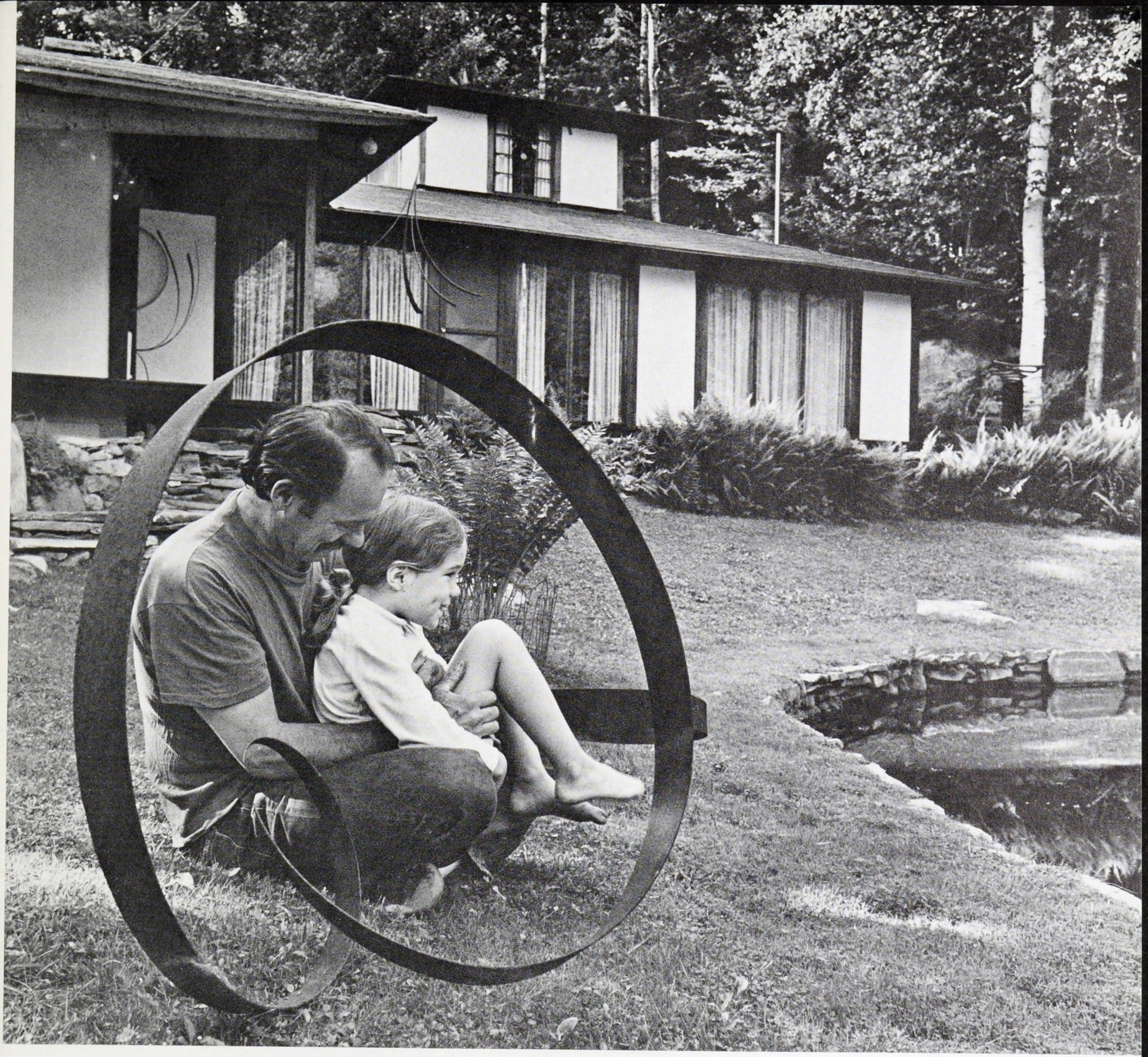
But the literature he wanted to produce was not coming, so he sought a change both of scene and life style in a last effort to produce books. He joined the Merchant Marine to see the world, or at least part of it. As an ordinary seaman, he spent almost a year in the Far East on freighters, keeping a diary that he hoped would become a book.

"It's fun, a great life, as long as you're doing it knowing that you won't have to do it the rest of your life. It's really marvelous — healthy, out-of-doors. But the problem is that at some point you would really get to like it, and then you would stop asking a lot of yourself. I couldn't do that. But the one thing I did find was that writing, as a career for me, was a mistake. I couldn't do it."

For the next 10 years he forsook literature and worked in New York designing furniture. He both free-lanced and held a job with the Edwin Jackson Co., specialists in fireplaces and fireplace equipment. "It was fun in a way, but I got fed up with being away from the manual part of making things."

During his New York period he returned often to Landgrove, and in 1959 started to build his present house. "In a way, this house was my first piece of sculpture," he says.

In 1962 he and wife Sheila moved to



Landgrove permanently — "it just was time to get out of New York. As soon as I moved up here, I became interested in sculpture. But first, since we had to eat, I decided I would manipulate iron into whatever shapes people wanted. I got myself an old building in Manchester (15 miles from Landgrove) which I used as a studio. I made hinges, furniture, gates, railings, lights. In fact, I still do lights when we need the money."

With his profits he continued to fix up his house, including his dirt floored blacksmith's shop, which he built against an open ledge of rocks on a natural fall of the hill. Why a dirt floor? Logic again — "Dirt is non-inflammable, and I do a lot of welding. Besides, the dirt was already there," is the way he explained it.

He closed down his Manchester studio in 1967 and now works continually out of his Landgrove home, spending his time around the smithy's shop, surrounded by odd-shaped pieces of iron he buys in Rutland. Most of his work is "filing and filling and polishing" — turning course iron into shining objects of delicate art.

Above the shop, higher on the ledge, is his house, and in front of it is a pond where Mary, 6, and John, 3, play or watch the ducks. "We've got to do something about those ducks," Sam noted. "They ate all the frogs and we like the frogs there."

The setting is tranquil and pastoral, and it is a tribute to Ogden's artistry that his abstract, contemporary sculptures that are such an integral part of the scene do not seem to conflict with it. The metal sculptures are everywhere: on the lawn, inside the house, peeking at visitors who climb the wooden steps from the road. They are his art, and for his own pleasure he has placed them accessible to the eye.

They are also the late 20th century version of the early 20th century craft of forging a horseshoe. The uses are different, but the smithy's talent is the same. Perhaps that is why these esthetic sculptures — as solid, logical and precise as an old-fashioned horseshoe — look as curiously at home in the rustic setting of Vermont as they do in the sophisticated world of a gallery of art.

Redwings have their Ways

of dividing up their territories and settling their differences in peace, ways that men could learn from with profit

by WILLIAM CARNEY

Drawings by ROBERT CANDY

> *The flocks of Blackbirds fill the air, forming a Line Like disbanded Soldiers all anxious to reach the point of destination each hurrying to pass the companion before him. . . .*
>
> JOHN JAMES AUDUBON
> *January 3, 1821*

THE SONG GURGLED and sputtered as if it ought to be liquid but was freezing. It sounded like a rusty gate recollecting where it had last been oiled. The song settled from the stereo onto our tape recorder.

"Kong-quer-kee. Konk-ka-leeee."

Six states southward the dawning mid-March sun kindled in rushes and swamp vines an early green and blazed in the crimson shoulders of a million coal-black birds. They talked loudly to each other. The lukewarm breeze that stirred the marsh where they had wintered seemed to be their breath. The rushes boiled blackbirds and their song.

Two weeks later Redwinged Blackbirds were in Pownal — where Vermont's Green Mountains spill over into Massachusetts and where the Taconics spill from New York to Vermont, a varied valley of slopes and lowlands, forests, fields and wet places. The birds were interested in land.

Redwings have territorial habits and each spring make a frontier of the Midwest and New England. The vast flocks that winter in southern states break into squadrons to fly north, then scatter as each male claims an individual territory. He holds this plot — perhaps half an acre — until his young are independent. Bold song and blood-hued wing insignia tell neighboring Redwings of his presence. Should another male trespass or contest his ownership, proud border stances and aerial skirmishes result.

A friend and I watched these property proceedings in Pownal near April's end. At that time males had been tending their holdings for several weeks, while females were just beginning to arrive. Pownal was still a man's world, where property had priority over courtship.

We were awkward human-kind, green initiates to nature's rites, dull at first to the meaning of what we saw. A bird perched apart from other birds, at peace with the world. Occasionally, he threw his head back, thrust forward his wings with their bright patches and sang the rusty, half-frozen song. About every two minutes, he jumped or glided to another spot, but never very far. His wings glistened like burnished metal.

The beauty was enough to stretch our sense of what was happening. Before and following the bird's solos, other voices answered — a hundred feet, a hundred yards, a quarter mile away. Crimson patches flashed erratic semaphore, clear signals, up and down the railroad where we stood. The bird's song had a chorus behind it; his movements were part of a dance; a larger pattern made sense out of his brightness. We stood in the midst of a concert and a community. Later we learned we could start concerts by playing the blackbird song we had taped.

The Redwing flew farther than before, gliding and paddling on air with short jabs of his wing-tips. He stopped at a willow sapling, displayed his wings and sang. Already another bird coasted toward him, singing in flight, stopping in the same willow two feet away. The second bird didn't sing there, but sat very straight and tilted his bill upright. The first assumed the same prideful stance. Then each flew back the way each had come, their confrontation over.

Repeatedly, we found that "bill-tilting" — this ceremonious facing-off — is the fine print of the Redwing property code. It states exactly where the boundary between two territories lies but with no stooping to violence.

What seems to happen is a compromise between pride and fear within each bird — leading to compromise between the two birds. Boundaries occur where each is too scared to fight, but too proud to flee. If there is a branch above one bird, he may hop up to it to get away from his adversary without relinquishing any ground. In this way, Redwings sometimes play vertical leap-frog up a whole tree.

Like any community, our colony of eight landowning blackbirds was not always peaceable. A rowdy bunch lived at one end of the tracks. We watched prolonged bill-tilting there four times and sometimes actual fights broke out.

One morning the chief malcontent dueled for half an hour with a total stranger. The two birds moved along fifty feet of brambles, bill-tilting constantly and working their way up shrubs from which they toppled back toward the ground — sometimes in a fury of fighting feathers.

Later we decided the owner — frustrated and unstable — was the product of a bad environment. The trees on his territory were not the twelve to twenty feet needed for neighborly, satisfying, leapfrogging bill-tilts. They had been cut, so a dirt road that crossed the tracks there would be safer.

Then we checked the colony's five other boundaries and found that they fell on the largest saplings along the railroad. They fell where the bill-tilting compromise worked best. So it seems the property laws which are coded in Redwing behavior — which in turn is coded in Redwing genes — also respond to local conditions on the land. When you have a frontier to homestead every spring, it's a beautiful system.

A landscape's quality — what you see in a place — depends on what you want from it. In Pownal, the Hoosic River's floodplain meets many wants, metes a complex quality.

Downvalley a gray dolomite cliff towers out of conifers, the remnant abutment of a dam that once held glacial waters. Geologists call it Kreigger Rock. In the other direction a man-made massif of equal size collects people and money from all over New England. It's called the Green Mountain Park.

For early human homesteaders — the first in Vermont — the floodplain offered alluvial and lake deposits at least partially covering the glacier's legacy of boulders.

(Some Dutch squatters stopped here in 1724. Half a century later lawmakers in both New York and New Hampshire claimed jurisdiction over the area, and local landowners had to solve the issue with a show of armed territorial defense. They were called the Green Mountain Boys.)

For the Boston & Maine Railroad, the floodplain offers a path of least resistance. Trains run intermittently all day. Trackside plants are cut when they threaten to be trees so the right-of-way wears a bushiness attractive to Redwings.

(Trains seem to get along fine with blackbirds, but wintering flocks in Georgia pose a considerable hazard to aircraft at dawn and dusk. When military action against Redwings proved futile, the Air Force finally re-arranged flight schedules there to allow for the birds.)

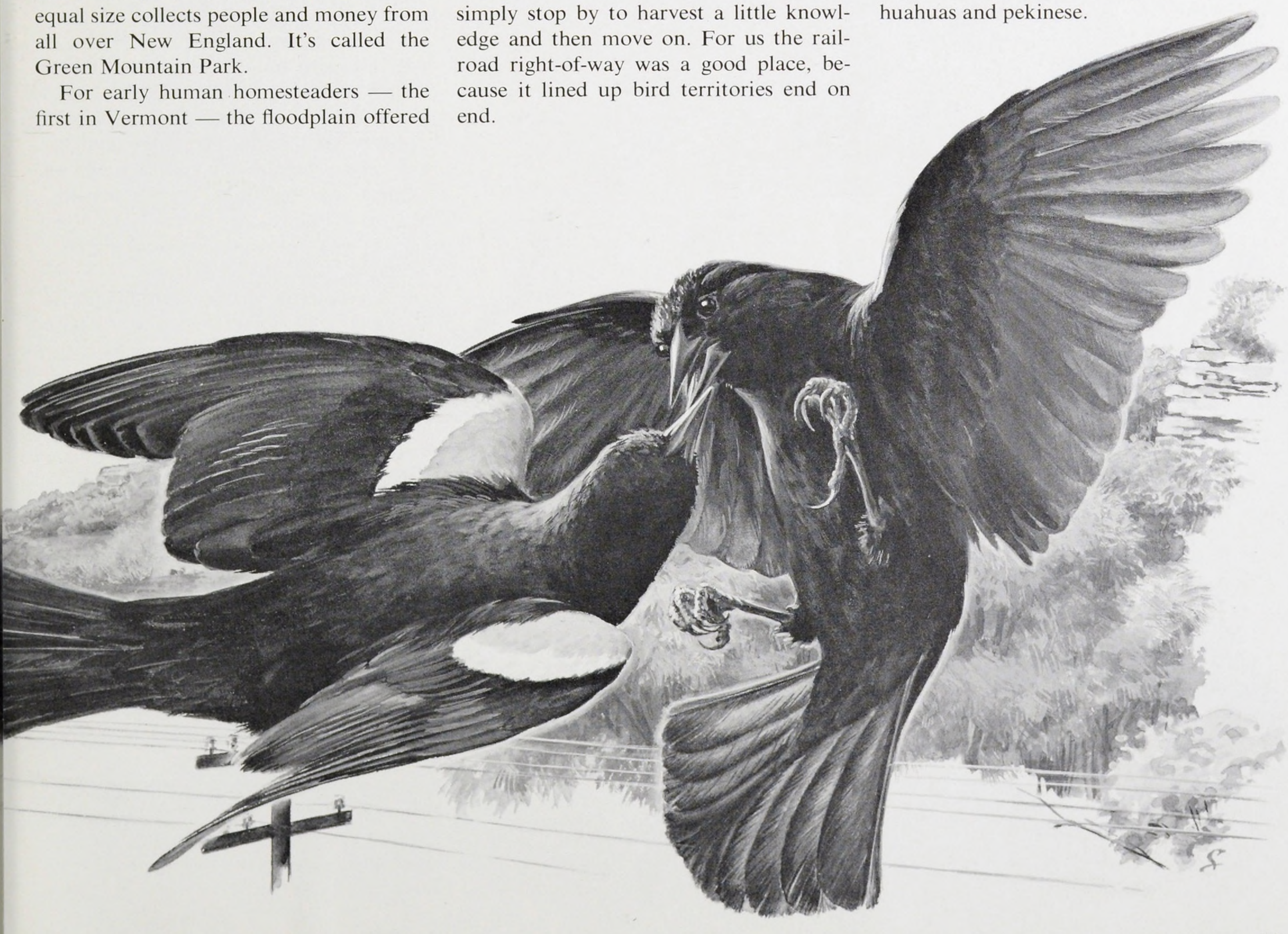
For the residents of frame houses, mobile homes and some suburban-styled brick structures, the floodplain offers an open, varied place to live — 2 A.M. trains notwithstanding. Some even grow corn there — blackbirds notwithstanding.

Then there are outsiders like us who simply stop by to harvest a little knowledge and then move on. For us the railroad right-of-way was a good place, because it lined up bird territories end on end.

What we wanted most to know was what Redwings wanted from the land. The peculiar peace-keeping ceremony that relies on having trees to climb seems to determine where a Redwing's boundaries are. But why the fuss to begin with? What is so valuable inside those all-important lines? Why is a bird territorial?

The females we watched arrive no doubt hold the answer to these questions. But if so, they were reluctant to divulge it — plain, brown-streaked beige birds, almost secretive as they skulked through brush. They will mate only with landed males.

The young the females bear demand immense amounts of food, and private property may be the parents' means of supplying it. A piece of land may be like an insurance policy drawn up early each spring against hungrier times. Yet Redwings usually feed far from the land they claim — on grain and grass seeds in fields and around barns. This type of food is singularly lacking on the tangled territories they defend; we never saw birds gathering food there. We were reminded of city-dwellers relying completely on country produce but nonetheless defending their apartments with vicious chihuahuas and pekinese.



Food is the stone one must turn over for an explanation of territoriality, but then you have to dig deeper. When they demand food, young Redwings are also demanding the presence and attention of their parents. For the female such attachment seems natural enough since she lays and incubates the eggs. But to keep the male nest-bound long enough after mating to help feed the young, nature had to enlarge and prolong his stake in the procreative process. A territory may be nature's way of holding his interest.

A young bird's demands for food and care are large, but even more profound is his demand for a place among the world's ranks of Redwings. A final possible explanation of territoriality is that it controls Redwing population by limiting the number of birds that mate each spring. Since females nest only on defended land, then the number of territories must determine the number of young.

Scientists warn people against "anthropomorphizing" — that is, applying human qualities to "lower" animals. I am proud to be guilty of just the opposite — looking at men as if they were beasts and shared the beautiful, complex and profoundly connected nature of all animals. It is a dream, of course, but I think truer than most that men concoct.

In Vermont, after a year's beginnings, fullness and harvest, men have a season to philosophize. Our work done, we were bound to do likewise. We were students in a college psychology course when we watched the Redwings. As we watched them, our minds skipped easily to Vietnam — well-thrown stones skipping over the Pacific.

Our Redwings shared their territories — though not without friction — with robins and song sparrows who sang, displayed, chased and compromised in their own ways. Most birds and many mammals defend territories. Farmers with shotguns and nations at war also fight over property. To hold, use and identify with land are deep, wide roots.

Later in the summer, higher in Pownal's hills, where the forest seemed like a small cathedral, we were caught in a ferocious crossfire of thrushes. The thrushes' voices lifted out of silence, lifted up to leaves and met there, mingling, each clear like a crystal glass about to shatter, but soft, as from condensation. They had in them echoes of silence — as dew, though wet, can contain in the sun's embers, echoes of light.

We may all feel and fight for land, but birds have worked out the procedure so much better than men.

LIVING HERITAGE

CHARLES T. MORRISSEY
DIRECTOR, VERMONT HISTORICAL SOCIETY

Them Is Us

TOURISTS have a hard time understanding that Vermont is a small state. "Hey, Buddy," a man yelled at me through his car window as I was walking one day to the Vermont Historical Society Museum, "how many people live in Vermont?"

"Well," I answered, "we used to be about 389,000. But in the last decade we've grown to about 440,000."

"Is that all?" he asked with disbelief. He turned to his wife, sitting next to him. "Only 440,000." I heard him exclaim. She was equally wide-eyed. Turning to the three kids in the back seat she repeated: "Only 440,000." The kids seemed impressed by this amazing fact; they looked at me with the awe usually reserved for appraising an unhealthy specimen of some form of animal life that is almost extinct.

"How do you manage to get along?" the father asked me. I had noticed the New York license plates on his car and was conjuring images in my mind about what *his* environment must look like — crowded streets, noise, air pollution, etc. But despite the temptation to throw the question back at him — how do *you* manage to get along — I decided instead to act the way Vermont residents are supposed to act. "It's hard," I conceded, but motioning toward the Vermont Statehouse I added: "Somehow we bumble along." We exchanged a few more parries about bigness and smallness; then I heard him say to his family, "Geez, only 440,000," as he accelerated his car and drove away.

New Yorkers aren't the only people who have a hard time understanding Vermont's population statistics. Back in 1968, on the Sunday before voting day in November when Richard Nixon and Hubert Humphrey were coming down to the final wire in their presidential campaigns, the Boston *Globe* printed a summary of the election outlooks in each New England state, and this is how Vermont was portrayed:

VERMONT
Registered voters: 525,000
Democrats: 167,000
Republicans: 222,000
Independents: 136,000
Leaning: NIXON

Among Vermonters there are mixed feelings about our population growth in the last decade. On the one hand there is pride that we should be so popular as to attract more residents. Some cite a report by Allied Van Lines, Inc., the national moving company, that shows Vermont was the number one "magnet state" in the nation last year. A computerized study of 227,283 separate shipments of household goods showed that for every family which moved away from Vermont there were four new families that moved in, and this ratio topped such growing states as California, Hawaii, and Florida.

Others note that Vermont's growth is spread unequally within the state: some Chittenden County towns around Burlington have grown 100 per cent or more in the last ten years, while the six towns in the lower part of Orleans County registered an average loss of 8 per cent. And those who want to keep Vermont small (some wear oval buttons that say "Keep Vermont A Secret") are delighted that we dropped from 47th to 48th in size nationally. Nevada overtook us in the 1960's and only Wyoming and Alaska have fewer people. For the contrary-minded Vermonter, who recalls with nostalgia the days not so long ago when Vermont had more cows than people, that is good news.

Vermont is not so populated that one of the major cliches of social relations has lost its pertinence. This "rule" is that the state is still so small that you should always assume the person you are talking *to* is related to the person you are talking *about*. Marguerite Hurrey Wolf gives a good example of this in one of the three books she has written, *How To Be A Doctor's Wife Without Really Dying* (her husband is former Dean of the College of Medicine at the University of Vermont; her book was published at $3.95 per copy by Wake-Brook House of Coral Gables, Florida). She describes house hunting in Burlington: "We were fresh from the impersonal towers of Manhattan and it never occurred to me that half the population in Burlington knew what houses were on the market, their approximate values and who had lived in them. I was gaily telling one colleague's wife about the monstrosity that I had visited that day, describing its ugly woodwork, antiquated kitchen and exorbitant price. I thought she cooled perceptibly and I asked her if she knew the house. 'Every newel post,' she replied; 'that's my family homestead.' "

To demonstrate that Vermont is still small enough to permit the people to know their state office-holders in Montpelier, unlike other states where the political leaders often are not readily recognized, almost every Vermonter has a story like the one told by Hazel Wills in her book, *Bill Wills and Company*. Her husband, Governor of Vermont from 1941 to 1945, was driving to Montpelier through the Northfield Gulf one winter morning when he had to stop his car because of the slippery road. The driver behind the Governor, a man with New Hampshire license plates on his car, also stopped. He seemed agitated. "If you get to Montpelier before I do, will you call the Governor and tell him I am held up?" he asked Wills. "I have an appointment with him for nine o'clock." Governor Wills solemnly assured the out-of-stater he would do just that.

Despite the population increase in Vermont since Governor Wills left the Statehouse in 1945, the number of Vermonters still remains less than the population of many metropolitan districts surrounding middle-sized cities elsewhere in the nation. Today it is estimated that 18 of the 41 ski areas in Vermont have enough combined capacity on their aerial lifts to transport the whole population of Vermont to the mountain tops in only four hours. (Of course we know several Vermonters who would refuse to go on such an exodus; accordingly the topic for the "Living Heritage" column in the summer issue of VERMONT LIFE will discuss why Vermonters are contrary-minded.)

Happily Vermont has grown without losing the quality of small-town life that permits a family to know its neighbors. The anonymity of urban America has not triumphed here. Those who are elected to positions in the Statehouse and to other public offices are not thought of by the citizenry as "them" — who run our public affairs without due consideration for "us." In Vermont, fortunately, "them" is still "us."

Quite appropriately our friend in Pomfret waxes lyrical on cooking the first

ASPARAGUS IN SPRING

by FRANK LIEBERMAN

photograph by HANSON CARROLL

HOLDING a great green bunch of asparagus on high, our friend stood in his kitchen looking implausibly like the Statue of Liberty. "Life, liberty and the pursuit of asparagus!" he exclaimed. We put it down to spring fever or perhaps the heady prospect, after the long Vermont winter, of fresh vegetables once more in gardens and markets.

Tucking a dish towel around his waist, preparatory to getting to work, he peered at us over the top of his glasses and said, "It's not native, you know," (ah, he'd been reading . . .), "asparagus was brought here by the early settlers from Europe. It grew wild on the southern coast of England and on the endless steppes of Russia it was eaten by the cattle, like grass — imagine! The name is Greek, asparagos. That became sparrow grass in 18th century England — they thought the use of the word asparagus pedantic."

By this time the stalks were washed and thoroughly peeled with a vegetable parer. This removes the tough skin and scales and reduces the cooking time. Cutting the asparagus into uniform length, about 7 inches, and saving the tougher parts for soup, our friend then ties them in small bundles with two strings, top and bottom. This simplifies removal from the pot and lessens damage to the tender heads.

Our friend stands the asparagus bundles up in the bottom of a double boiler about ⅓ full of salted water, turns the heat up quite high and inverts the top of the double boiler as a lid.

He cooks the stalks for ten or twelve minutes. By then the tops should be nicely steamed and the stems receptive to a fork. Our friend likes his asparagus a bit on the crispy side.

The asparagus should be taken from the pot as soon as they are done, placed on paper towels to drain and the strings cut loose. Our friend insists that the first asparagus of the season must be served with nothing but a great deal of melted butter and lemon juice, or possibly a Hollandaise sauce (*see* VERMONT LIFE, *Summer 1970)* and on a slice of toast if you like.

In a few days he finds he has accumulated an abundance of stems so with these, plus a few whole stalks, he makes

CREAM OF ASPARAGUS SOUP (for 4)

1 lb. asparagus stems and a few whole fresh stalks
3 cups strong chicken stock
1 small onion, chopped fine
1 Tbspn butter
1 Tbspn flour
½ cup heavy cream
2 egg yolks
croutons

Break the tender tops from the whole asparagus, put them to one side. Chop the rest with the leftover stems into half-inch pieces and simmer these with the onion in the chicken stock for ¾ of an hour. They should be completely soft. Remove from the stock and rub through a sieve back into the stock.

Cut the tender asparagus diagonally into inch long pieces and simmer in the stock while you make a roux with the butter and flour. Blend in a cup of the hot stock and slowly add the cream. DO NOT BOIL. Beat the egg yolks with ¼ cup cool water, then add a cup of the hot stock a little at a time so as not to cook the eggs. Mix with the soup and when the eggs have thickened it, serve in bowls with croutons and a dash of paprika.

If a Sunday morning isn't quite as occupied as usual with spring chores our friend has been known to take time for a Sunday brunch, and for it make either a fluffy omelet or an asparagus tart.

FLUFFY OMELET WITH ASPARAGUS (for 2)

4 eggs, separated
12 cooked, hot asparagus spears
large heated platter: 2 heated plates

Beat egg whites until fairly stiff, beat yolks until slightly creamy. Melt a tablespoon of butter, not margarine, in a 12-inch no-stick Teflon frying pan. Our friend knows you don't need all that much butter, he just likes the flavor.

When the butter has melted and is just beginning to color, fold the yolks into the whites and when the butter has lightly browned pour in the eggs and cook over moderate heat for six to eight minutes. Do not disturb it in any way nor turn the omelet over. The bottom should be quite well done, the top only slightly firm. It acts as the sauce.

Now our friend slides the omelet onto the large heated platter, seasons it with salt and pepper, divides it in two with forks and places 6 asparagus spears on one side of each portion, folds the other side over and serves it forth. By this simple method he avoids Disaster In The Pan!

For the asparagus tart, as our friend points out, preparations must be made ahead of time, for while it is very simple it is definitely not a spur-of-the-moment dish.

For the crust blend together with your fingers ½ cup of butter or margarine at room temperature with 2 cups of all-purpose flour and ½ tspn of salt. Then rub the mixture between the palms of the hands to break up any lumps. On your counter top or in a wide flat bowl make a well in the flour mixture and gradually add about ⅔ of a cup of cold water. Stir it in with your fingers until all the mixture has been moistened. You do not have to use all the water, just enough to make a dough that is soft enough to form into a ball but one that does not stick to the fingers. Flatten it out a bit, cover it with foil and let it improve itself in the refrigerator for 6 hours or more. It will easily keep there 4 or 5 days and may also be frozen. Before using, however, it should be taken from the cold and allowed to reach room temperature. You are now ready to make

ASPARAGUS TART (for 4)

4 eggs
1 cup milk
⅓ cup heavy cream
24 cooked asparagus spears
8 large very thin slices of smoky Vermont ham
grated Parmesan cheese

Set oven to heat at 375°. Beat the eggs with the milk and cream, season with a little salt, a few drops of Tabasco and a tablespoon of grated Parmesan cheese.

Roll out the dough approximately ⅛-inch thick and line an 8 x 12-inch glass ovenproof baking dish with it. Brush the crust lightly with white of egg and put the dish in the hot oven for a couple of minutes to set the egg white.

Roll each slice of ham around 3 asparagus spears and place them neatly in the crust, pour in the custard, sprinkle lightly with more grated Parmesan and bake for 30 to 40 minutes. The tart is done when an inserted knife blade comes out clean.

As he came into the dining room, bearing the golden brown tart hot from the oven, our friend noticed several of his neighbor's cattle grazing in the pasture below his house. He put the tart on the table, then stood gazing at the peaceful scene. For the moment the Pomfret hills had become, we were certain, the endless steppes of Russia, knee deep in asparagus!

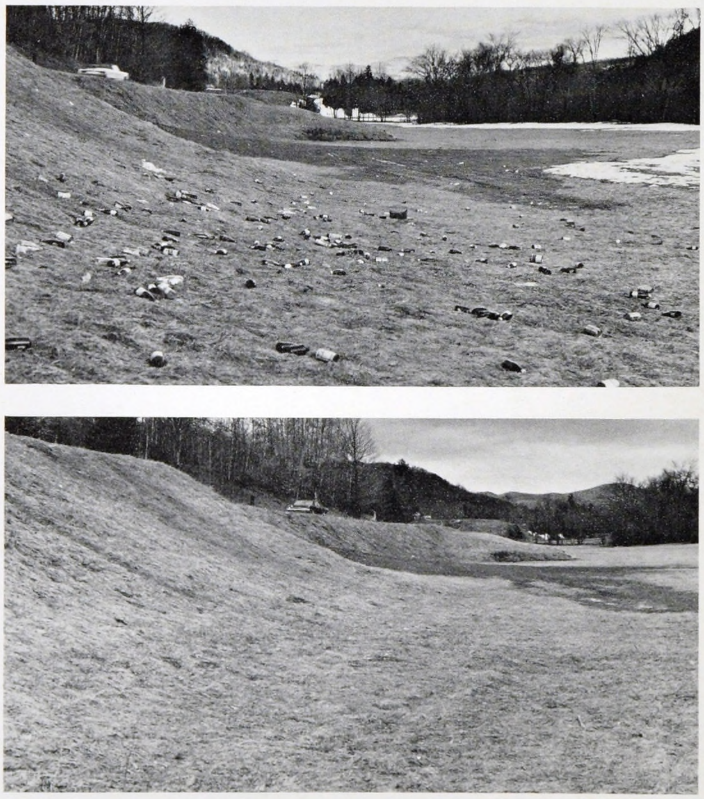
Green Mountain
POST BOY

One of Vermont's most effective attacks on scenic pollution is Governor Davis's Greenup Day, first held last May 11th.

On that single Saturday some 67,000 Vermonters spread out along 2,400 miles of State and Interstate highway and 8,300 miles of town roads to pick up the winter's accumulation of "travel trash." About 17,000 other citizens worked on the Day's planning and final cleanup.

Three-quarters of the road workers were students — who probably were less responsible for the mess than anybody. Ninety per cent of the cultch they picked up — 40,000 cubic yards of it — was beer cans and bottles. But that's not all. The final tally for Greenup Day — to be held again this spring — included:

Twelve dead deer, $150 in cash, one dead cow, a purse previously stolen from a Boston woman, a revolver, two safes, one sleeping bag, a fish rod and one each refrigerator, bed, bathtub.



The effectiveness of Vermont's clean sweep is shown in these photographs taken on Rte. 100 in Stockbridge by Clyde Smith, before and after.

The year 1970 came and went without definite sighting of Champlain's famous Lake Monster. Yet in late September a report surfaced of "a long, pure white object" seen at dusk racing over the surface of the Lake at Isle La Motte. At least eight witnesses estimated its length from 20 to 50 feet.

Conjecture that it was a flock of skimming birds was discounted. Others thought it was *something* traveling just below the water's surface and at a speed, "faster than any speedboat," sufficient to cause "a white, bubbly ripple."

The 654 residents of Charleston, up in the Northeast Kingdom, last summer staged an old-fashioned but unusual bee. The town earlier had voted to bond for $400,000 to build a new central school, and the cost of a road to the site now loomed. But on one Saturday 25 volunteers with donated trucks and road equipment hauled and graded 150 loads of fill to build a basic two-lane road. It saved the town $4,000.

Vermont's southeast corner, where the state joins Massachusetts and New Hampshire, has been under the turbid water of the Connecticut for many years. (See our Spring 1957 issue for details.)

The submerged marker came out of hibernation last summer, however, when the river level was drawn down for the rebuilding of a dam at Turner's Falls, and the long-hidden copper top was located under several feet of mud. Until the dammed waters again flooded back at the end of October, many visitors, including state officials, came for a morbid and perhaps last look.

The kind of disastrous fire which periodically used to level large parts of many Vermont towns and cities, one night a year ago destroyed Swanton's Merchant's Row, the main business area. Overnight many major businesses and buildings were wiped out, families were left homeless and jobs eliminated. But in the best Vermont tradition Swanton mobilized. By early fall, and with help from others, a new and modern Merchant's Row stood completed. VERMONT LIFE salutes the citizens of Swanton who built a better town from the ashes of disaster.

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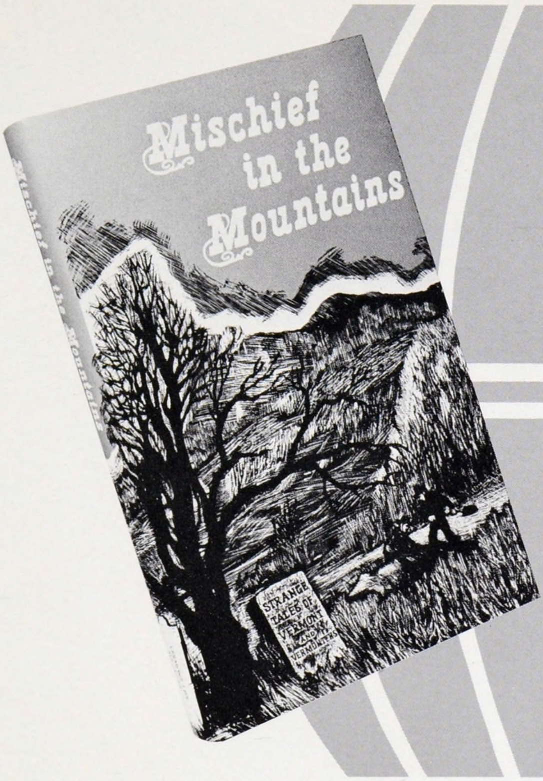
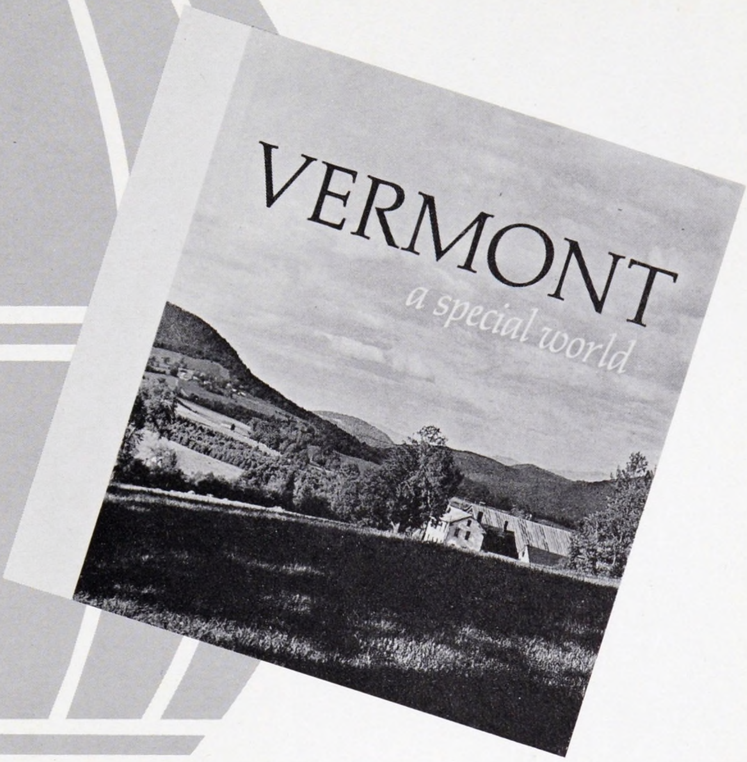
I certify that the statements made by me above are correct and complete.
Douglas Bernardini, s/s Business Manager





A Double-Barreled Offer

Now for a very limited time—until May 25th—you can order a full year's subscription to "Vermont Life" Magazine—for yourself or a friend—for just $1! That is, if you order also either of these two grand Vermont books. Try the fascinating "Mischief in the Mountains"—it's just $5.95—for spooky bedtime reading. Or choose that beautiful classic, "Vermont: A Special World," at $15. Add a dollar to either price to win this great bargain.
An order blank is found elsewhere in this issue.

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